### O'Bryen, Barbara

From:

Seharaseyon, Jegatheesan

Sent:

Wednesday, September 29, 2004 11:28 AM

To:

O'Bryen, Barbara

Subject:

09/526437

Hi,

Can you please do an interference search SEQ ID NO:2 and a word search of the protein, with a word size of 6 amino acid for 09/526,437

Thanks a lot!

Seyon.

J.Seharaseyon Art Unit 1647 Remsen 4C61 Mailbox 4C70

Phone: (571)-272-0892 Fax: (571)-273-0892



# STIC Search Report Biotech-Chem Library

### STIC Database Tracking Number

TO: Jegatheesan Seharaseyon

**Art Unit: 1647** 

Location: REM-4C61/4C70 Serial Number: 09/526437

Thursday, February 09, 2006

From: Beverly Shears

**Location: Biotech-Chem Library** 

**REM 1A54** 

Phone: 571-272-2528

beverly.shears@uspto.gov

### Search Notes

#### Published Applications Database - November 2005

Published\_Applications Nucleic Acid and Published\_Applications Amino Acid database searches now generate two sets of results each. The Published\_Applications databases have been split into two parts to reduce the amount of time required for their daily updates. This results in more machine time being available for processing searches.

Newly published applications will appear in the Published\_Applications\_New databases; older published applications make up the Published Applications Main databases.

Searches run against Nucleic Acid Published\_Applications produce two sets of results, with the extensions .rnpbm (Published\_Applications\_NA\_Nain) and .rnpbn (Published\_Applications\_NA\_New).

Searches run against Amino Acid Published\_Applications produce two sets of results, with the extensions .rapbm (Published\_Applications\_AA\_Nain) and .rapbn (Published\_Applications\_AA\_New).



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From:

Sent: To:

Seharaseyon, Jegatheesan Wednesday, February 01, 2006 5:30 PM STIC-Biotech/ChemLib

Subject:

09/526437

Please search SEQ ID NO: 2 in the interference and pending databases. Please also search a word size of 30.

Thanks. J.Seharaseyon Art Unit 1647 Remsen 4C61 Mailbox 4C70

Phone: (571)-272-0892 Fax: (571)-273-0892

Searcher: Searcher Phone: Date Searcher Picked up:\_ Date completed: Searcher Prep Time: Online Time: \_\_\_

Type of Search AA#: Oligomer: S/L: Encode/Transl:\_ Structure #:\_\_\_ Inventor:\_ \_ Litigation:\_\_\_ Vendors and cost where applicable STN:\_\_\_\_ DIALOG:\_\_\_ QUESTEL/ORBIT: LEXIS/NEXIS:

SEQUENCE SYSTEM:
WWW/Internet: Other (Specify):

vendors-



Copyright

GenCore version (c) 1993 - 2004

5.1.6 Compugen Ltd.

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Abg73071	Abg73894	Aar99938	Aaw83928	Aar99944	Aar99941	Aar99937	Aao19639	Aab66988	Aar99932	Aar99931	Abu08820	Add01627	Aae34363	Abp55109	Abg71823	Aab66976	Aay43400	Aaw38345	Aar99934
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# ALIGNMENTS

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RESULT 1
AAY05742
inflammation; arthritis; septicaemia; autoimmune qisease; psoinflammatory bowel disease; transplant rejection; graft versus host disease; infection; stroke; ischaemia; acute respiratory disease syndrome; restenosis; brain injury;
                                                                                                                                                                                                                                                                                                                                                                                      Tumour necrosis factor receptor; TR1; osteoprotegerin; agonist; antagonist; screening; human; cancer; AIDS; Alzheimer's disease; inflammation; arthritis; septicaemia; autoimmune disease; psoriasis; inflammation; arthritis; septicaemia; autoimmune disease; psoriasis;
                                                                                                                                                                 WPI; 1999-246560/21.
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                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                            (SMIK ) SMITHKLINE BEECHAM CORP.
                                                                                                                                                                                                                                                                                                                                              disease; atherosclerosis; therapy.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
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The present sequence represents tumour necrosis factor receptor (TNFR) TR1, also known as osteoprotegerin. The invention relates to TNFR related polypeptides TR1, TR3 and TR5 (see AAY05742-44) and their ligand TL3 (see AAY05745). TR1, TR3, TR5 and TL3 are used in claimed methods of identifying agonists and antagonists, i.e. compounds that bind to the receptors or ligand, and which activate (agonist) or inhibit activation of (antagonists) TR1, TR3, TR5 or TL3. A screening kit for identifying agonists, antagonists, ligands, receptors, substrates, enzymes etc. for

Identifying agonists and antagonists of tumor necrosis factor related receptors TR1, TR3 and TR5, and of ligand TL3, useful for treatment of cancer, AIDS, Alzheimer's disease, bone disease etc.

Disclosure; Page 10-12; 23pp; English.

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26-AUG-1997;
29-AUG-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                         inflammation; septicemia; autoimmune disease; transplant rejection; graft vs. host disease; infection; stroke; ischemia; brain injury; AIDS; acute respiratory disease syndrome; restenosis, bone disease; cancer;
                                                                                                                                                                     04-JUN-1998;
                                                                                                                                                                                                                                                                              EP897114-A2
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  (SMIK ) SMITHKLINE
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Human FTHMA-070 protein.

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FTHMA-070; human; neurological disorder; therapy; diagnosis

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Best Local Similarity
Matches 401; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              assessing the ability of the candidate compound to compete with TR1 or TR2 binding to TL2 or TL4. TR and TL agonists and antagonists are useful for treating diseases caused by imbalance of TL or TR polypeptide levels, which cause: chronic and acute inflammation, arthritis, septicemia, autoimmune diseases, transplant rejection, graft vs. host disease, infection, stroke, ischemia, acute respiratory disease syndrome, restenosis, brain injury, AIDS, bone diseases, cancer, athersclerosis and Alzheimer's disease. The present sequence represents a TNF-R related polypeptide TR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to identifying agonists or antagonists to tumour necrosis factor receptor (TNF-R) related polypeptides (TR1 and TR2, TL2 and TL4). The method comprises: (a) (i) contacting TR1 or TR2 with a candidate compound in the presence of TL2 or TL4; or (ii) contacting TL2 or TL4 with a candidate compound in the presence of TL2 or TL4; or TR2; and (b) or TL4 with a candidate compound in the presence of TR1 or TR2; and (b)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Identifying agonists and antagonists to tumour necrosis factor receptor (TNF-R) related polypeptides (LR1, LR2, LT2 and LT4) - useful for treating stroke, Alzheimer's disease and AIDS.
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                              Sequence 401
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of disorders involving cellular processes,
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RESULT 4
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                                                                           receptor (TR1) polypeptide. An agonist to the TR1 receptor is useful for inhibiting tumour growth, to stimulate human cellular proliferation, to regulate immune response and antiviral response, to protect against the effects of ionising radiations, to protect against chlamydia infections, to regulate growth, and to treat immunodeficiencies such as in human immunodeficiency virus (HIV). An antagonist to the TR1 receptor is useful for treating T-cell mediated autoimmune diseases, acquired immunodeficiency syndrome (AIDS), septic shock, cerebral malaria, graft rejection, cytotoxicity, cachexia, apoptosis, and inflammation. TR1 polynucleotides and polypeptides, and TR1 agonists and antagonists are useful for treating cancers, cardiovascular diseases, inflammatory diseases, atherosclerosis, diabetes mellitus, neurological disorders, autoimmune diseases for promoting anticonness for treating allerny.
                                                                                                                                                                                                                                                                                                                                                                  Novel tumor necrosis factor family receptor for diagnosing acquired immunodeficiency syndrome, cancer, cardiovascular inflammatory diseases and autoimmune diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AIDS; cerebral malaria; graft rejection; cytotoxicity; cachexia; apoptosis; inflammation; cancer; cardiovascular disease; angiogenesis; inflammatory disease; atherosclerosis; diabetes mellitus; allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; tumour necrosis factor family receptor; TR1; tumour growth; cell proliferation; chlamydia infection; immunodeficiency; septic shock; T-cell mediated autoimmune disease; acquired immunodeficiency syndrome;
                                               autoimmune diseases, for wound healing, f
                                                                                                                                                                                                                                                                              The present sequence represents a human tumour necrosis factor family receptor (TR1) polypeptide. An agonist to the TR1 receptor is useful :
                                                                                                                                                                                                                                                                                                                                Claim 13; Fig 1A-B; 228pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Greene JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-MAR-1999;
26-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-MAR-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fleischmann RD,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    disorder; autoimmune disease; wound healing; bone formation,
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99US-0136248P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry)
                                                 for promoting angiogenesis, or regulating bone formation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "mature protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Z.
                                                 for treating allergy, and for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             401
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Sequence 401

DB 3;

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RESULT 5
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ID AAB60570
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Best Local
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                                                   Human Osteoclastogenesis Inhibitory Factor nucleotides, nucleotide polymorphisms, useful for studying e.g. osteodisease and rheumatoid arthritis.
                                                                                                                                                Chew
                                                                                                                                                                                                                                                                                                                                  Human; TNPRSF11B; osteoclastogenesis inhibitory factor; single nucleotide polymorphism; SNP; osteoclast recruitment; osteoclast function; osteoclast static bone disease; Paget's disease; rheumatoid arthritis; periodontal bone disease.
                                                                                                                                                                                                                                                                                                                                                                                                     Human TNFRSF11B protein.
                            Claim 10;
                                                                                                                      WPI; 2001-147175/15.
                                                                                                                                                                                                   09-JUL-1999;
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                                                                                                          AAF69948
                                                                                                                                                                           GENAISSANCE
                                                                                                                                               Denton RR,
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                          Fig 4; 114pp; English.
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                                                                                                                                                                                                   99US-0143020P
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                                                                                                                                               Duda A, Nandabalan K,
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                                                                ides, comprising single osteoporosis, Paget's
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The present sequence is the human osteoclastogenesis inhibitory factor

WO200297033-A2 Homo sapiens

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ARESULT 6
ANESGEN 6
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Best Local
                                                                                                                                                               TRAIL receptor; TR4; cancer; Kaposi's sarcoma; cerebellar degeneration; hyperproliferative disorder; neurodegenerative disorder; immune disorder; Alzheimer's disease; Parkinson's disease; amyotrophic lateral sclerosis; retinitis pigmentosa; Huntington's disease; Hashimoto's thyroiditis; rheumatoid arthritis; multiple sclerosis; Sjogren's syndrome; asthma; biliary cirrhosis; Behcet's disease; Crohn's disease; allergic disorder; glomerulonephritis; immune deficiency syndrome; mysathenia gravis; polymyositis; inflammatory disorder; rheumatoid arthritis; septic shock; infectious disease; acquired immunedeficiency syndrome; wysathenia gravis; albs; proliferative disorder; myelodysplastic syndrome; paplastic anaemia; ischaemia; stroke; cardiovascular disorder; peripheral artery disease; limb ischaemia; arrhythmia; congestive heart failure; neovascularisation; mention. hyman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TNFRSF11B). Polynucleotides comprising one or more of twenty four no single nucleotide polymorphisms in the TNFRSF11B gene have been identified. TNFRSF11B regulate osteoclast recruitment and function. A understanding of variations in the gene should thus be useful in developing new therapies for metabolic disorders caused by abnormal osteoclast recruitment and function such as osteoporosis, metastatic disease, Paget's disease, rheumatoid arthritis and periodontal bone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE36245 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRAIL receptor protein,
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                                                                                                                                                                                                                                                                                  CC bind to TRAIL receptor (TR4). Sequences of the invention are useful for treating, preventing or ameliorating cancer (e.g. colon, breast, uterine, CC pancreatic, lung, gastrointestinal or central nervous system cancer e.g. CC medulloblastoma, neuroblastoma, glioblastoma and Kapposi's sarcoma) in CC detecting, diagnosing, prognosing or monitoring cancers and other hyper-cc proliferative disorders. Antibodies of the invention are useful for CC treating, preventing or ameliorating neurodegenerative disorders (e.g. Richimson's disease, amyotrophic lateral sclerosis, CC retinitis pigmentosa, cerebellar degeneration and Huntington's disease, Sygren's syndrome, biliary cirrhosis, Behcet's disease, Crohn's disease, Crohn's disease, Crohn's disease, Crohn's disease, Crohn's disease, amyotrophic lateral sclerosis, CC sygren's syndrome, biliary cirrhosis, Behcet's disease, Crohn's disease, of infectious diseases (e.g. acquired immune deficiency syndrome), inflammatory CC infectious diseases (e.g. acquired immune deficiency syndrome), inflammatory CC disorders (e.g. asthma, allergic disorders and rheumatoid arthritis), CC infectious diseases (e.g. acquired immunedeficiency syndrome), inflammatory CC disorders. They are also useful for treating myelodysplastic syndromes (e.g. applastic anadother viral infections) and proliferative, myocardial infarction and reperfusion injury (such as that caused by stroke, myocardial infarction and reperfusion injury), septic shock, cachexia, CC anceria and toxin-induced liver diseases (such as alcohol). They are also useful for treating cardiovascular disorders including peripheral catery diseases such as limb ischaemia, arrhythmia, congestive heart failure and cardiovascular tuberculosis, diseases or disorders associated with neovascularistic and as adjuvants to enhance immune responsiveness composition or recovery from surgery, trauma, radiation therapy and composition in the present sequence is human TRI protein used in the invention of the present sequence is human TRI protein used 
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Matches 401
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04-JUN-2001;
02-AUG-2001;
21-SEP-2001;
09-OCT-2001;
07-NOV-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel antibody useful for treating cancers and other hyperproliferative disorders, immunospecifically binds to TRAIL receptor and comprises variable heavy or light chain complementarity determining regions.
                                                                                                                                                                                                                                                                              Sequence
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HRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNAT 180
                                                              VCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRYLEIEFCLK
                                                                                                                                             MNKLLCCALVFLDISIKWTTQETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKT
                                                                                                                                                                                                                                                                                  401
                                       VCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRYLEIEFCLK
                                                                                                                MNKLLCCALVFLDISIKWTTQETFPPKYLHYDBETSHQLLCDKCPPGTYLKQHCTAKWKT
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2001US-0294981P.

2001US-0309176P.

2001US-0323807P.

2001US-0327364P.

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2001US-0341237P.

2002US-0369860P.
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larity 100.0%;
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04-JUN-2002;
18-JUL-2002;
15-AUG-2002;
13-NOV-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                       complementarity determining region; CDR; light chain variable domain; VL; TRAIL receptor 7; TR7; tumour necrosis factor; KILER; death receptor 5; DR5; TRAIL receptor 2; TRAIL-R2; TNF-related appticals-inducing ligand; Kaposi's Barcoma; central nervous system; medulloblastoma; neuroblastoma; glioblastoma; neuroblastoma; glioblastoma; staticody therapy; nootropic; AIDS; acquired immune deficiency syndrome; neurodegenerative disorder; immunosuppressive; neuroprotective; antibody therapy; osteoprotegrin; OPG; osteoclastogenesis inhibitory factor; OCIF; TNFRSF11B; FTHMA-090.
                                                                                                              New antibody or its fragment, useful for treating, preventing or ameliorating a cancer, e.g. colon, breast, uterine, pancreatic, lugastrointestinal cancer, or Kaposi's sarcoma or, graft versus host
                                                                        Disclosure; Page
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein coordinate data; heavy chain variable domain; VH; cancer;
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                                                                                                                                                                                                                   HUMAN GENOME SCI INC.
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2002US-0396591P.
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The invention relates to an isolated antibody or its fragments such VHCDR1 (heavy chain variable domain complementarity determining region). VHCDR2, VHCDR3, VLCDR3 (light chain variable domain complementarity determining region), VLCDR2 or VLCDR3. The antibody or its fragment immunospecifically binds TRAIL (tumour necrosis factor; TNF-related

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fibrotic disease; cysteine-rich domain; osteoprotegerin; scleroderma; antiinflammatory; gene therapy; human.
                                                                                                                                                                                                         26-MAR-2003; 2003WO-EP050080
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       Power C,
                                                                                                                                         10-APR-2002; 2002EP-00100364.
                                                                                                                                                                                                                                                                                                                                               WO2003084560-A2
                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human osteoprotegerin amino acid sequence SEQ ID NO:2
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                                                                          (ISTF ) ARS APPLIED RES SYSTEMS HOLDING NV
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          Plater-Zyberk C;
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100.0%; Pred. No. 0;
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cc cysteine-rich domains of osteoprotegerin; (c) a mutein of (a) (b) that is cenceded by a DNA sequence that hybridises to the complement of the DNA cc encoded by a DNA sequence that hybridises to the complement of the DNA cc sequence encoding (a) (b) under moderately or highly stringent conditions identity with (a) (b); and where any changes in the amino acid sequence are conservative amino acid substitutions to the amino acid sequence cc are conservative amino acid substitutions to the amino acid sequence of cidentity with (a) (b); and where any changes in the amino acid sequence cc are conservative amino acid substitutions to the amino acid sequence in (c). (a) (b); or (d) a salt or an isoform, fused protein, functional cc derivative, active fraction or circularly permutated derivative of (a) (c). Also described: (l) a polypeptide comprising the 401-amino acid sequence and one, two, three or four cysteine-rich domains of costeoprotegerin; and (2) a method for treating or preventing a fibrotic disease, particularly scleroderma. The substance has antiinflammatory activity, and can be used in gene therapy. A vector or cell comprising the nucleic acid molecule encoding a polypeptide of the invention can be used for inducing or enhancing the endogenous production of the cc polypeptide in a cell for the preparation of a medicament for treating or preventing a fibrotic disease, in particular scleroderma. The present cc used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes a substance which is useful for the manufacture of a medicament for treating or preventing fibrotic disear. The substance comprises: (a) a polypeptide comprising a fully defined sequence having 401 amino acids (see ADD01625 and ADD01627), or its areacids 22-401 or 22-194; (b) a polypeptide comprising 1, 2, 3 or 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2003-804248/75.
N-PSDB; ADD01624.
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á 문 Ś 片 δ 밁 Ş 밁 S 밁 δ 밁 გ Query Match Best Local Simi Matches 401; Sequence 401 361 301 301 241 241 181 181 121 361 121 61 61 1 MNKLLCCALVFLDISIKWTTQETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKT Similarity VCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRYLEIEFCLK SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKT 360 HDNICSGNSESTQKCGIDVTLCEEAFFRFAVFTKFTPNWLSVLVDNLPGTKVNAESVERI MNKLLCCALVFLDISIKWTTQETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKT VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL 401 KRQHSSQEQTFQLLKLWKHQNKDQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLME HDNICSGNSESTQKCGIDVTLCEEAFFRFAVPTKFTPNWLSVLVDNLPGTKVNAESVERI HRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNAT HRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNAT VCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRYLEIEFCLK SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKT KRQHSSQEQTFQLLKLWKHQNKDQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLME Conservative AA; 100.0%; Score 401; 1 100.0%; Pred. No. 0; tive 0; Mismatches 83 7; 0 Length 401; Indels <u>.</u> Gaps 240 120 120 300 300 240 180 180 60

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Best Local Similarity
                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                      This sequence represents the full length osteoclastogenesis inhibitory factor (OCIF) of the invention. The OCIF has a molecular weight by SDS-PAGE of 60 kD under reducing conditions and 120 kD under non- reducing conditions. The protein is adsorbed onto cation-exchangers or heparin and its activity is lowered after 10 mins at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90 deg.C. OCIF is useful in the control of bone resorption and therefore in the treatment and prevention of
                                                                                                                                                                                                                                                                                                      Sequence 401 AA;
                                                                                                                                                                                                                                                                                                                            disorders of bone resorption, e.g. osteoporosis
                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 64-66; 183pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA encoding osteoclastogenesis inhibitory bone resorption control, esp. treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goto M,
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21-JUL-1995;
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                                                                                                                                                                                                 LLCCALVFLDISIKWTTQETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKTVCA
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95JP-00207508.
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100.0%; Pred. No. 0;
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M, Higashio
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LLCCALVFLDISIKWTTQETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKTVCA

Query Match Best Local Similarity

99.3%; Scilarity 100.0%; For Conservative 0;

Score 398; DB 2; Pred. No. 0; 0; Mismatches 0;

Length 401 Indels

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Matches

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RESULT 10
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                                                      The present sequence represents human OCIF genome DNA protein which is specifically claimed in the present invention. The present invention describes: (1) a method of inhibiting the formation of osteoclasts and/or antipyretic proteins, which have the following characteristics: (i) MW determined by SDS-PAGE of approximately 60 kDa under reducing conditions, and 60 kDa and 120 kDa under non-reducing conditions; (ii) 401 as sequence (III) (see AAW53239); (iii) affinity to cation exchangers and heparin; (iv) its osteoclast formation inhibiting activity reduced by heating at 70 degrees Celsius for 10 minutes or 56 degrees Celsius for 30 minutes, and (v) its antipyretic activity reduced by heating at 90 degrees Celsius for 10 minutes, and (2) a method for preparing the above proteins. The proteins are useful for, e.g. treatment and prevention of osteoporosis, rheumatism or multiple sclerosis, and also as antigens for immunological diagnosis of these diseases and disorders
   Sequence 401 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1998-169150/15.
N-PSDB; AAV20768.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 4; Page 26-28; 36pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inhibition of osteoclast formation and/or antipyretic activity - useful for, e.g. treating osteoporosis, rheumatism and multiple sclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nakagawa N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; OCIF; genome; osteoclast; antipyretic; osteoporosis; rheumatism; multiple sclerosis.
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                                                                                            Novel compound containing osteoclastogenesis inhibitory factor active ingredient, for treating cachexia due to, e.g. malignant tumor, tuberculosis, diabetes and blood diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Osteoclastogenesis inhibitory factor; OCIF; cachexia; treatment; o malignant tumour; tuberculosis; diabetes; blood disease; anorexia; endocrine disorder; infection; AIDS; weight loss; anaemia.
   This sequence represents the human osteoclastogenesis (OCIF) amino acid sequence. OCIF is used in compounds
                                                         Claim 1; Page 9-10; 13pp;
                                                                                                                                                                       WPI; 2000-317844/27.
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                                                                                                                                                                                                                                              SANKYO CO LTD.
SNOW BRAND MILK PROD
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1. .21
/label= Signal peptide
22. .401
/label= Osteoclastogenesis inhibitory
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                                                         Japanese
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     29-JUN-2001; 2001JP-00198985
                                                                              02-JAN-2003
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of cachexia. The compounds are used for preventing or treating cachexia due to a malignant tumour, tuberculosis, diabetes, blood diseases, endocrine disorders, infections, AIDS, weight loss, anaemia, oedema, and
                                                                          CPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNATHDN
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                     SLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL
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RESULT 13
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Best Local S
Matches 398
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 15-JAN-2004
                                 ADD37427;
                                                                ADD37427 standard;
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Antiinflammatory;
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                                                                                                                                                                  Antirheumatic; Antiarthritic;
                                                                                                                                                                      inhibitory
                                                                                                                                                              osteoporosis
                                                                                                                                                                  factor; OCIF;
c; Cytostatic;
                                                                                                                                                                             factor complex
                                                                                                                                                                 prostaglandin; osteopathic;
Immunosuppressive;
                                                                                                                                                                             encoding sequence.
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Homo sapiens.

WO2003074084-A1

27-FEB-2003; 2003WO-JP002259

01-MAR-2002; 2002JP-00055356

(SANY ) SANKYO CO LTD

တ Nakajima H

2003-853480/79

Composition containing complex of osteoclastogenic inhibitory factor and polysaccharide, useful for treating metabolic bone disease, also contains inhibitor of prostaglandin.

Claim 8; SEQ ID NO 1; 93pp; English

The present invention relates to a complex of at least one costeoclastogenic inhibitory factor (OCIP), or its analog or variant, occombined to a polysaccharide and a substance that suppresses production of prostaglandin and/or competes with biological activity of prostaglandin. The complex is used to treat or prevent a wide range of metabolic bone diseases, specifically osteoporosis, osteopenia, Paget's disease, osteocyletis, infectious foci due to bone loss, hypercalcemia, osteoclasis, joint destruction caused by rheumatism, osteoarthritis, loss of periodontal bone, cancer metastasis to bone, osteonecrosis or costeocyte death caused by traumatic injury, Gaucher's disease, sickle cell anemia, systemic lupus erythematosus, non-traumatic injury, osteodystrophy and cachexia caused by carcinoma, metastasis or malignant costeodystrophy and cachexia caused by carcinoma, metastasis or malignant blood diseases. Administration of OCIP as a complex ensures prolonged retention in the circulation, while co-administration with the complex results in a synergistic increase in activity. The present sequence represents human osteoclastogenic inhibitory factor complex encoding

Sequence 401 A

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 HSSQEQTFQLLKLWKHQNKDQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLMESLP
                                                                 I CSGNSESTQKCGI DVTLCEEAFFR PAVPTKFTPNWLSVLVDNLPGTKVNAESVERI KRQ
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                                                    ICSGNSESTQKCGIDVTLCEEAFFRFAVPTKFTPNWLSVLVDNLPGTKVNAESVERIKRQ
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                                                                                                                       This sequence represents a mutated version of the full length osteoclastogenesis inhibitory factor (OCIF) of the invention. This sequence represents OCIF-CL in which amino acide 379-380 of the mature OCIF protein are deleted. The OCIF of the invention has a molecular weight by SDS-PAGE of 60 kD under reducing conditions and 120 kD under non-reducing conditions. The protein is adsorbed onto cation-exchangers or heparin and its activity is lowered after 10 mins at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90 deg.C. OCIF is useful in the control of bone resorption and therefore in the treatment and prevention of disorders of bone resorption, e.g. osteoporosis
                                                                                                                                                                                                                                                                                                                                                                         Goto M, T
Yasuda H,
                                                                                                                                                                                                                                                                                             DNA encoding osteoclastogenesis inhibitory factor protein - useful for bone resorption control, esp. treatment of osteoporosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                        20-FEB-1995;
21-JUL-1995;
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, Nakagawa
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LLCCALVFLDISIKWTTQETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKTVCA
                                                98.8%; S
llarity 100.0%;
Conservative 0;
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95JP-00207508.
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va N, Morinaga
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M, Higashio
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                  The present sequence represents human OCIF genome DNA protein which is shown in the present invention. The present invention describes: (1) a method of inhibiting the formation of osteoclasts and/or antipyretic proteins, which have the following characteristics: (i) MW determined by SDS-PAGE of approximately 60 kDa under reducing conditions, and 60 kDa and 120 kDa under non-reducing conditions; (ii) 401 as sequence (III) (see AAW53329); (iii) affinity to cation exchangers and heparin, (iv) its osteoclast formation inhibiting activity reduced by heating at 70 degrees Celsius for 10 minutes or 56 degrees Celsius for 30 minutes, and (2) a method for preparing the above proteins. The proteins are useful for, e.g. treatment and prevention of osteoporosis, rheumatism are useful for, e.g. treatment and prevention of osteoporosis, rheumatism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human OCIF genome DNA-2 protein
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                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 16-26; 36pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inhibition of osteoclast formation and/or antipyretic activity for, e.g. treating osteoporosis, rheumatism and multiple sclero
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nakagawa N,
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1: /cgn2_6/ptodata/2/pubpaa/US07 PUBCOMB.pep:*

2: /cgn2_6/ptodata/2/pubpaa/US06 NEW PUB.pep:*

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5: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

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                            3 US-10-164-592-2

4 US-10-244-674-3

4 US-10-32-673-5

14 US-10-39-785-5

14 US-09-062-1131-5

15 US-10-364-045-1

14 US-10-364-045-1

14 US-10-322-858-5

15 US-10-785-105-1
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US-10-039-785-5
US-10-066-209-1
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# ALIGNMENTS

THE T85-RELATED PROTEIN

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Sequence 2, Application US/10105934
Publication No. US20020150988A1
Publication No. US20020150988A1
GENERAL INFORMATION:
APPLICANT: MCCarthy, Sean A.
HOLTMAN, Douglas
TITLE OF INVENTION: NOVEL MOLECULES OF THE FTHMA-070-
RELATED PROTEIN FAMILY AND THE T8:
FAMILY AND USES THEREOF
COUNTRY: USA
COUNTRY: USA
COUNTRY: USA
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION NUMBER: US/10/105,934
FILING DATE: 25-Mar-2002
PRIOR APPLICATION NUMBER: US/09/062,389
FILING DATE: 17-APR-1998
APPLICATION NUMBER: 60/062,017
FILLING DATE: 10-OCT-1997
APPLICATION NUMBER: 60/044,746
FILING DATE: 18-APR-1997
APPLICATION NUMBER: 35,283
REGERERUCE/DOCKET NUMBER: 09404/051001
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C.
STREET: 225 Franklin Street
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CURRENT APPLICATION NUMBER: US/10/039,785
CURRENT FILING DATE: 2002-05-07
PRIOR APPLICATION NUMBER: 60/369,860
PRIOR FILING DATE: 2002-04-05
PRIOR FILING DATE: 2002-04-05
PRIOR APPLICATION NUMBER: 60/341,237
PRIOR FILING DATE: 2001-12-20
PRIOR APPLICATION NUMBER: 60/331,310
PRIOR APPLICATION NUMBER: 60/331,044
PRIOR FILING DATE: 2001-11-14
PRIOR APPLICATION NUMBER: 60/327,364
PRIOR APPLICATION NUMBER: 60/327,364
PRIOR APPLICATION NUMBER: 60/327,364
PRIOR APPLICATION NUMBER: 60/327,364
PRIOR FILING DATE: 2001-09-21
PRIOR APPLICATION NUMBER: 60/323,807
PRIOR APPLICATION NUMBER: 60/329,907
PRIOR APPLICATION NUMBER: 60/329,907
PRIOR APPLICATION NUMBER: 60/3294,981
PRIOR APPLICATION NUMBER: 60/294,981
PRIOR APPLICATION NUMBER: 60/294,981
PRIOR FILING DATE: 2001-06-04
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Best Local Similarity
Matches 401; Conserv
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Publication No. US20020067646A1
                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Salcedo et al.
TITLE OF INVENTION: Antibodies that Immunospecifically Bind to TRAIL
TITLE OF INVENTION: Receptors
FILE REFERENCE: PF550
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TELEFAX: 617/542-8906
TELEY: 200154
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361 VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL
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US-10-066-209-1

LENGTH: 401 TYPE: PRT ORGANISM: HOMO SAPIENS

401

Version

Best Local Similarity

100.0%;

Score Pred.

401; No. 0 띪

Length

Query Match

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PRIOR APPLICATION NUMBER: 09/072,993
PRIOR FILING DATE: 1998-05-06
PRIOR PRIOR APPLICATION NUMBER: 60/055,513
PRIOR FILING DATE: 1997-08-13
PRIOR FILING DATE: 1997-08-26
PRIOR FILING DATE: 1997-08-26
PRIOR APPLICATION NUMBER: 60/057,550
PRIOR APPLICATION NUMBER: 60/057,550
PRIOR FILING DATE: 1997-08-29
NUMBER OF SEQ ID NOS: 9
SOFTWARE: FASUSEQ for Windows Version 3
SEQ ID NO 1
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PRIOR FILING DATE: 2001-05-25
NUMBER OF SEQ ID NOS: 66
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                              Sequence 1, Application US/10066209 Publication No. US20020115110A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 401; Conservative C
                                                                                                                                                                                                                        APPLICANT: Brigham-Burke, Michael R.
APPLICANT: Young, Peter R.
TITLE OF INVENTION: A METHOD OF IDENTIFYING AGONIST
TITLE OF INVENTION: ANTAGONISTS FOR TUMOR NECROSIS
FILE REFERENCE: GH-50030-D1
CURRENT APPLICATION NUMBER: US/10/066,209
CURRENT FILING DATE: 2001-10-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 401
TYPE: PRT
ORGANISM: Homo sapiens
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APPLICANT: Greene, John M.

APPLICANT: Fleischmann, Robert D.

TITLE OF INVENTION: Human Tumor Necrosis Factor Receptor FILE REFERENCE: 1488.0710007

CURRENT APPLICATION NUMBER: US/10/164,592

CURRENT FILING DATE: 2002-06-10

PRIOR APPLICATION NUMBER: US 08/469,637

PRIOR PILING DATE: 1995-06-06

PRIOR APPLICATION NUMBER: PCT/US95/03216

PRIOR APPLICATION NUMBER: PCT/US95/03216

PRIOR APPLICATION NUMBER: PCT/US95/03216

PRIOR PILING DATE: 1995-03-15

NUMBER OF SEQ ID NOS: 10

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APPLICANT: Chew, Anne
APPLICANT: Benton, R. Rex
APPLICANT: Bieglecki, Karyn M
APPLICANT: Bieglecki, Karyn M
APPLICANT: Bieglecki, Karyn M
APPLICANT: Stephens, J. Claiborne
TITLE OF INVENTION: HAPLOTYPES OF THE TWFRSF11B GEN
TITLE OF INVENTION: HAPLOTYPES OF THE TWFRSF11B GEN
TILE REFERENCE: TWFRSF11B WMH-0001US (CIP)
CURRENT APPLICATION NUMBER: US/10/044,674
CURRENT FILING DATE: 2002-01-09
PRIOR APPLICATION NUMBER: PCT/US00/18803
PRIOR FILING DATE: 2000-07-10
NUMBER OF SEG ID NOS: 94
COPTWARE: Patentin version 3.1
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; Sequence 3, Application US/10044674
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TYPE: PRT
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401; <u>.</u>

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240 240 180

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CURRENT APPLICATION NUMBER: US/10/322,673
CURRENT FILING DATE: 2002-12-19
PRIOR APPLICATION NUMBER: 60/341,237
PRIOR FILING DATE: 2001-12-20
PRIOR APPLICATION NUMBER: 60/369,877
PRIOR FILING DATE: 2002-04-05
PRIOR APPLICATION NUMBER: 60/384,828
PRIOR APPLICATION NUMBER: 60/396,591
PRIOR APPLICATION NUMBER: 60/396,591
PRIOR FILING DATE: 2002-07-18
PRIOR FILING DATE: 2002-07-18
PRIOR APPLICATION NUMBER: 60/403,370
PRIOR APPLICATION NUMBER: 60/403,370
PRIOR APPLICATION NUMBER: 60/403,370
PRIOR APPLICATION NUMBER: 60/425,737
PRIOR FILING DATE: 2002-07-11
PRIOR FILING DATE: 2002-11-13
NUMBER OF SEQ ID NOS: 72
LENGTH: 401
TYPE: PRT
ORGANISM: Homo sapiens
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US-10-139-785-5
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Sequence 5, Application US/10139785
Publication No. US20030190685A1
GENERAL INFORMATION:
APPLICANT: Salcedo et al.
TITLE OF INVENTION: Antibodies that Immunospecifically
TITLE OF INVENTION: Receptors
FILE REFERENCE: PF550
CURRENT APPLICATION NUMBER: US/10/139,785
CURRENT FILING DATE: 2002-05-07
PRIOR APPLICATION NUMBER: 60/369,860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.0%; Score 401; Best Local Similarity 100.0%; Pred. No. 0; Matches 401; Conservative 0; Mismatches
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Publication No. US20030180296A1
GENERAL INFORMATION:
APPLICANT: Salcedo et al.
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US-09-062-113-5

Sequence 5, Application US/09062113 Patent No. US20020051969A1

GENERAL INFORMATION:
APPLICANT: GOTO, ME
APPLICANT: TSUDA, E
APPLICANT: WOCHIZU
APPLICANT: YANO, KE
APPLICANT: KOBAYASI
APPLICANT: SHIMA, N
APPLICANT: YASUDA,
APPLICANT: MAKAGAW
APPLICANT: MORINAGAW
APPLICANT: UEDA, ME

KOBAYASHI, Fumie SHIMA, NO. US20020051969Aluyuki YASUDA, Hisataka NAKAGAWA, NO. US20020051969Aluaki MORINAGA, Tomonori

Masatsugu

TSUDA, Eisuke MOCHIZUKI, Shin'ichi YANO, Kazuki

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OR FILING DATE: 2001-12-20
OR APPLICATION NUMBER: 60/331,310
OR FILING DATE: 2001-11-14
OR APPLICATION NUMBER: 60/331,044
OR APPLICATION NUMBER: 60/331,044
OR FILING DATE: 2001-11-07
OR APPLICATION NUMBER: 60/327,364
OR FILING DATE: 2001-10-09
OR APPLICATION NUMBER: 60/323,807
OR APPLICATION NUMBER: 60/323,807
OR APPLICATION NUMBER: 60/309,176
OR FILING DATE: 2001-09-02
OR FILING DATE: 2001-09-02
OR FILING DATE: 2001-09-07
OR PILING DATE: 2001-09-07
OR FILING DATE: 2001-09-07
OR FILING DATE: 2001-09-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/294,981 FILING DATE: 2001-06-04
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                  361 VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL 401
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VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL
                                                               SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKT
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LOCATION: -21.0
OTHER INFORMATION:
US-09-062-113-5
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PRICE DATE: 20-FEB-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/915
PILING DATE: 20-FEB-1996
ATTORNEY/AGENT INFORMATION:
NAME: MOORE, RONDA P.
REGISTRATION NUMBER: 44,244
REFERENCE/DOCKET NUMBER: FUN-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7000
TELEPAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LEWITH: 41 25142
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Best Local (
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APPLICATION NUMBER: JP 5/
FILING DATE: 20-FEB-1995
PRIOR APPLICATION DATA:
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FILING DATE: 21-JUL-1995
PRIOR APPLICATION DATA:
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                             Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
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184 ICSGNSESTQKCGIDVTLCEEAFFRFAVPTKFTPNWLSVLVDNLPGTKVNAESVERIKRQ 243
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                                  CPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNATHDN
                                                      CPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLLTQKGNATHDN 183
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100.0%; Pre
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Best Local
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CURRENT FILING DATE: 2002-66-27
PRIOR APPLICATION NUMBER: UP 2001-198985
PRIOR FILING DATE: 2001-06-29
NUMBER OF SEQ ID NOS: 1
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APPLICANT: Okada, Ju
APPLICANT: Kurihara,
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TITLE OF INVENTION: A complex comprising OCIF
FILE REFERENCE: 02280/HG
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                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: mat peptide LOCATION: (+1)..(+380) OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: SIGNAL LOCATION: (-21)..(-1) OTHER INFORMATION:
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ORGANISM: Homo sapiens
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Mochizuki, Shinichi
Nishi, Hirotaka
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Kurihara, Atsushi
Numazawa, Taku
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Conservative 0;
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CURRENT APPLICATION NUMBER: US/10/364,045
CURRENT FILING DATE: 2003-02-11
PRIOR APPLICATION NUMBER: US/10/183,091
PRIOR FILING DATE: 2002-06-27
PRIOR APPLICATION NUMBER: JP 2001-198985
PRIOR FILING DATE: 2001-06-29
NUMBER OF SEQ ID NOS: 1
SOFTWARE: PATENTIN VERSION 3.1
SEQ ID NO 1
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Best Local Similarity
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Publication No. US20030139325A1
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APPLICANT: Mochizuki, Shinichi
APPLICANT: Nishi, Hirotaka
APPLICANT: Miyazaki, Hideki
TITLE OF INVENTION: A complex comprising OCIF
FILE REFERENCE: 02280/HG
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APPLICANT: Okada, Junichi
APPLICANT: Kuriharra, Ateushi
APPLICANT: Numazawa, Taku
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TYPE: PRT
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SOFTWARE: PatentIn version 3.1
SEQ ID NO 5
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Best Local Similarity
Matches 398; Conserv
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CURRENT APPLICATION NUMBER: US/10/232,858
CURRENT FILING DATE: 2002-09-03
PRIOR APPLICATION NUMBER: PCT/JP96/00374
PRIOR FILING DATE: 1996-02-20
PRIOR APPLICATION NUMBER: 08/915,004
PRIOR APPLICATION NUMBER: 08/915,004
PRIOR FILING DATE: 1997-08-20
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APPLICANT:
APPLICANT:
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APPLICANT: TSUD
APPLICANT: MOCH
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APPLICANT: HIGASHIO, Kanji
TITLE OF INVENTION: No. US20030153048A1el Proteins and Methods for Producing the Prote
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SLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL 401
                 SLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL
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KOBAYASHI, Fumie
SHIMA, No. US20030153048A1uyuki
YASUDA, Hisataka
NAKAGAWA, No. US20030153048A1uaki
MORINAGA, Tomonori
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MOCHIZUKI, Shin'ichi
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100.0%; Pred. No. 0;
tive 0; Mismatches
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APPLICANT: Kumakura, Seiichiro
APPLICANT: Nakajima, Tomoko
ITILE OP INVENTION: A Pharmaceutical Composition
FILE REFERENCE: 03117/HG
CURRENT APPLICATION NUMBER: US/10/377,076
CURRENT FILING DATE: 2003-02-28
PRIOR APPLICATION NUMBER: JP 2002-055356
PRIOR FILING DATE: 2002-03-01
NUMBER OF SEQ ID NOS: 1
SOFTWARE: Patentin version 3.1
SOFTWARE: Patentin version 3.1
Sequence 5, Application US/10785109
Publication No. US20040142426A1
GENERAL INFORMATION:
APPLICANT: GOTO, Masaaki
APPLICANT: TSUDA, Eisuke
APPLICANT: MOCHIZUKI, Shin'ichi
APPLICANT: YANO, Kazuki
APPLICANT: KOBAYASHI, Fumie
APPLICANT: SHIMA, Nobuyuki
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US-10-377-076-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 398;
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TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: SIGNAL
LOCATION: (-21) ...(-1)
OTHER INFORMATION:
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; LENGTH: 401
; TYPE: PRT
; ORGANISM: Homo s
US-10-785-109-5
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TITLE OF INVENTION: Novel Proteins and Methods for Producing the Prot
FILE REFERENCE: 16991.017
CURRENT APPLICATION NUMBER: US/10/785,109
CURRENT FILING DATE: 2004-02-25
FRIOR APPLICATION NUMBER: US 10/232,858
PRIOR FILING DATE: 2002-09-03
PRIOR APPLICATION NUMBER: US 08/915,004
PRIOR APPLICATION NUMBER: US 08/915,004
PRIOR FILING DATE: 1997-08-20
PRIOR APPLICATION NUMBER: PCT/JP96/00374
PRIOR FILING DATE: 1996-02-20
PRIOR APPLICATION NUMBER: JP 207508/1995
PRIOR APPLICATION NUMBER: JP 207508/1995
PRIOR APPLICATION NUMBER: JP 207508/1995
PRIOR APPLICATION NUMBER: JP 054977/1995
PRIOR APPLICATION NUMBER: JP 054977/1995
PRIOR APPLICATION NUMBER: JP 054977/1995
PRIOR FILING DATE: 1995-02-20
NUMBER OF SEQ ID NOS: 108
COFTWARE: DATE: 1995-02-20
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Best Local Similarity 100.0%; Pred. No. 0;
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                    SLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL 401
                                                                                               GKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKTVTQ 363
                                                                                                                                                       HSSQEQTFQLLKLWKHQNKDQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLMESLP
                                                                                                                                                                            HSSQEQTFQLLKLWKHQNKDQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLMESLF 303
SLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL
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MORINAGA, Tomonori
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401
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RESULT 14

US-10-785-114-5

Sequence 5, Application US/10785114

Publication No. US20040143859A1

; Publication No. US20040143859A1

; GENERAL INFORMATION:

APPLICANT: GTOTO, Massaaki

APPLICANT: TSUDA, Eisuke

APPLICANT: WOCHIZUKI, Shin'ichi

APPLICANT: WOCHIZUKI, Fumie

APPLICANT: KOBAYASHI, Fumie

APPLICANT: SHIMA, Nobuyuki

APPLICANT: SHIMA, Nobuyuki

APPLICANT: NAKAGAWA, Nobuaki
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RESULT 15
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; LENGTH: 401
; TYPE: PRT
; ORGANISM: Homo mapiens
US-10-785-114-5
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CURRENT FILING DATE: 2004-02-25
PRIOR APPLICATION NUMBER: US 10/232,858
PRIOR FILING DATE: 2002-09-03
PRIOR FILING DATE: 2002-09-03
PRIOR PRIOR DATE: 1997-08-20
PRIOR PRIOR DATE: 1997-08-20
PRIOR APPLICATION NUMBER: PCT/JP96/00374
PRIOR APPLICATION NUMBER: PCT/JP96/00374
PRIOR FILING DATE: 1996-02-20
PRIOR PRIOR DATE: 1996-02-20
PRIOR PRIOR DATE: 1995-07-21
PRIOR APPLICATION NUMBER: JP 054977/1995
PRIOR FILING DATE: 1995-02-20
NUMBER OF SEQ ID NOS: 108
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Best Local Simi
Matches 398;
                                                                                                                                                                                           Sequence 73, Application US/09062113
Patent No. US20020051969A1
                                                                                                                                                                              GENERAL INFORMATION:
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TITLE OF INVENTION: Novel Proteins and Methods for Producing the Proteins
FILE REFERENCE: 16991.016
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Similarity 100.0%; Pred. No. 0;
98; Conservative 0; Mismatches
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                                                                                                      TSUDA, Eisuke
MOCHIZUKI, Shi
YANO, Kazuki
                                                   YANO, Kazuki
KOBAYASHI, Fumie
SHIMA, No. US20020051969Aluyuki
                    YASUDA, Hisataka
NAKAGAWA, No. US20020051969Aluaki
MORINAGA, Tomonori
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   Masatsugu
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                                                                                       CPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNATHDN
ICSGNSESTQKCGIDVTLCEEAFFRFAVPTKFTPNWLSVLVDNLPGTKVNAESVERIKRQ
                                                      CPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNATHDN
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Conservative

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Mismatches

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63 63

183 123

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US-09-062-113-73
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INFORMATION FOR SEQ ID NO:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/.
FILING DATE: 20-FEB-1996
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: No. US20020051969A1el Proteins and Methods for Producing TITLE OF INVENTION: the Proteins NUMBER OF SEQUENCES: 108
                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 399 amino acids
                                                                                                                                                                                                                                                                                                                                                     NAME: MOORE, RONDA P.
REGISTRATION NUMBER: 44,244
REFERENCE/DOCKET NUMBER: FJI
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 0 FILING DATE: 20-FEB-1996 ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 54977/1995
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC-DOS/MS-DOS
COETMATING SYSTEM: PC-DOS/MS-DOS
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APPLICATION NUMBER:
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LOCATION:
                                                                    LOCATION: 1..378
OTHER INFORMATION:
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Search completed: September 29, 2004, 13:02:38 Job time : 136 secs	364 SLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKIS 399	364 SLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKIS 399	304 GKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKTVTQ 363	304 GKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKTVTQ 363	244 HSSQEQTFQLLKLWKHQNKDQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLMESLP 303	244 HSSQEQTFQLLKLWKHQNKDQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLMESLP 303	184 ICSGNSESTQKCGIDVTLCEEAFFRFAVPTKFTPNWLSVLVDNLPGTKVNAESVERIKRQ 243

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T40795 T40795 T40795 T40795 T40795 C;Species: Schizosaccharomyces pombe C;Species: Schizosaccharomyces pombe C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 21-Jan C;Accession: T40795 R;Beck, A; Reinhardt, R; Lyne, M; Rajandream, M.A.; Barrell, B.G. submitted to the EMBL Data Library, October 1998 A;Accession: T40795 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Accession: T40795 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Ccession: 1-102 < BEC> A;Cross-references: EMBL:AL032684; PIDN:CAA21786.1; GSPDB:GN00067; SPD A;Cross-references: EMBL:AL032684; PIDN:CAA21786.1; GSPDB:GN00067; SPD C;Genetics: A;Gene: SpDB:SPBP8B7.01c A;Map position: 2 A;Introns: 38/2; 83/3 C;Superfamily: Schizosaccharomyces hypothetical protein SPBP8B7.01c Query Match Best Local Similarity 100.0%; Pred. No. 23;	RESULT 1 T45354 hypothetical protein MLCB57.48 [imported] - Mycobacterium leprae C;Species: Mycobacterium leprae C;Species: Mycobacterium leprae C;Species: Mycobacterium leprae C;Date: 31-Jan-2000 #sequence_revision 31-Jan-2000 #text_change 31-Jan C;Accession: T45354 R;Parkhill, J.; Barrell, B.G.; Rajandream, M.A. submitted to the EMBL Data Library, September 1997 A;Reference number: Z16918 A;Accession: T45354 A;Reference number: Z16918 A;Residues: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 1-69 <par> A;Residues: 1-69 <par> A;Residues: 1-69 <par> A;Cross-references: EMBL: Z99494; PIDN:CAB16688.1 A;Experimental source: cosmid B57 C;Genetics: A;Note: MLCB57.48 Query Match Best Local Similarity 100.0%; Pred. No. 16; Matches 7; Conservative 0; Mismatches 0; Indels 0; G Qy 129 GVVQAGT 135                   Db 20 GVVQAGT 26</par></par></par>	30 7 1.7 497 2 A84956  31 7 1.7 501 2 E81437 hypothetica 32 7 1.7 504 2 T33404  33 7 1.7 518 2 AF0937 hypothetica 34 7 1.7 639 2 A544000  36 7 1.7 637 2 A48189  37 1.7 639 2 B48189  38 7 1.7 639 2 B48189  39 7 1.7 639 2 B48189  39 7 1.7 639 2 B48189  40 7 1.7 639 2 H71535  41 7 1.7 693 2 S49228  41 7 1.7 698 2 H71535  42 7 1.7 724 2 T19601  43 7 1.7 805 2 A75014  44 7 1.7 805 2 G86208  ALIGNMENTS
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C;Date: 22-May-1981 #sequence_revision 22-May-1981 #text_change 02-Sep-1997
C;Accession: A02056
R;Putnam, F.W.; Liu, Y.S.V.; Low, T.L.K.
J. Biol. Chem. 254, 2865-2874, 1979
A;Title: Primary structure of a human IgAl immunoglobulin. IV. Streptococca.
A;Reference number: A92249; MUID:79151016; PMID:107164
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G90414
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G;Superfamily: immunoglobulin V region; immunoglobulin homology

C;Keywords: glycoprotein; heterotetramer; immunoglobulin; pyroglutamic ac:

F;15-98/Domain: immunoglobulin homology <IMM>
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental

F;22-96/Disulfide bonds: #status experimental

F;28/Binding site: carbohydrate (Asn) (covalent) #status experimental
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 conserved hypothetical protein [imported] - Sulfolobus solfataricus C;Species: Sulfolobus solfataricus C;Date: 24-May-2001 #sequence_revision 24-May-2001 #text_change 24-May-2001 C;Accession: G90414
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A; Residues: 1-139 < KUR>
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A; Accession: G90414
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A;Cross-references: GDB:128528;
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R;Takami, H.; Nakasone, K.; Takaki, Y.; Maeno, G.; Sasaki, R.; Masui, N.; Fuji, Nucleic Acids Res. 28, 4317-4331, 2000
A;Title: Complete genome sequence of the alkaliphilic bacterium Bacillus haloduz A;Reference number: A83650; MUID:20512582; PMID:11058132
A;Accession: B84070
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A;Title: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Anal A;Reference number: AB1807; MUID:21595285; PMID:11759840
A;Accession: AB1817
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J. Bacteriol. 183, 4823-4838, 2001
A;Title: Genome Sequence and Comparative Analysis of the Solvent-Producing Bacterium A;Reference number: A96900; MUID:21359325; PMID:21359325
A;Accession: F97290
A;Status: preliminary
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C;Date: 14-Sep-2001 #sequence_revision 14-Sep-2001 #text_change 30-Sep-2001
C;Accession: F97290
A;Molecule type: DNA
A;Residues: 1-183 <STO>
A;Cross-references: GB:AP001518; GB:BA000004; NID:g10175792; PIDN:BAB07081.1; GSPDB:GN001
A;Experimental source: strain C-125
                                                                                                                                                                                                                                                                                                                                                                                                                                                           hypothetical protein BH3362 [imported] - Bacillus halodurans (strain C-125) C;Species: Bacillus halodurans C;Date: 01-Dec-2000 #sequence_revision 01-Dec-2000 #text_change 15-Jun-2001 C;Accession: BB4070
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C;Superfamily: acetolactate synthase small chain
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A;Experimental source: strain PCC 7120
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A;Residues: 1-170 <KUR>
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A;Status: preliminary
A;Molecule type: DNA
A;Residuse: 1-195 <KUR>
A;Cross-references: GB:BA000018; PID:g13701260; PIDN:BAB42554.1;
A;Experimental source: strain N315
                                                                                                                                                                                                                                                                     R;Kuroda, M.; Ohta, T.; Uchiyama, I.; Baba, T.; Yuzawa, H.; Kobayashi, I.; Cui, L.; ma, A.; Mizutani-Ui, Y.; Kobayashi, N.; Sawano, T.; Inoue, R.; Kaito, C.; Sekimizu, C.; Shiba, T.; Hattori, M.; Ogasawara, N.; Hayashi, H.; Hiramatsu, K. Lancet 357, 1225-1240, 2001
A;Title: Whole genome sequencing of meticillin-resistant Stapylococcus aureus. A;Reference number: A89758; MUID:21311952; PMID:11418146
A;Accession: E89924
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                                                                                                                                                                                                                                                                                                                                                                                    C;Species: Staphylococcus aureus
C;Date: 10-May-2001 #sequence_revision 10-May-2001 #text_change 22-Oct-2001
C;Accession: E89924
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A; Residues: 1-188 <HAL>
A; Cross-references: EMB
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(;Species: Caenorhabditis elegans
C;Daeceis: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
C;Accession: T26648
R;Hallsworth, K.
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A;Gene: BH3362
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A;Accession: T26648
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A;Description: The sequence of C. elegans cosmid Y38A8
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7; Conserv
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SVFGLLL 184
                                 SVFGLLL 173
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ce: strain Bristol N2; clone Y38A8
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100.0%; Pred. No. 39
tive 0; Mismatches
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RESULT 12
B69641
C;Accession: B69641

R;Kunst, F; Ogasawara, N.; Moszer, I.; Albertini, A.M.; Alloni, G.; Azevedo, V.; Bertert C.; Bron, S.; Brouillet, S.; Bruschi, C.V.; Caldwell, B.; Capuano, V.; Carter, N.M.; Cho; A.; Ehrlich, S.D.; Emmerson, P.T.; Entian, K.D.; Errington, J.; Fabret, C.; Ferrari, E. Nature 390, 249-256, 1997
                                                                                                              cyclase his? - Bacillus subtilis
C;Species: Bacillus subtilis
C;Date: 05-Dec-1997 #sequence_revision
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R;Nagashima, K.V.; Igarashi, N.; Harada, J.; Nagashima, S.; Matsuura, K.; Shimada, K. submitted to the EMBL Data Library, November 1999
A;Description: Determination of Nucleotide Sequences of Rubrivivax gelatinosus Photosynth
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A; Note: YCL012w
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A;Reference number: S19337
A;Accession: S19339
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A;Cross-references: EMBL:AB034704; PIDN:BAA94055.1
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A; Accession: T50902
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A; Residues: 1-121,'V', 123-142,'FPLA', 147,'LTLLI'
A; Cross-references: EMBL:X59720; MIPS:YCL012w
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C;Date: 19-Mar-1997 #sequence_revision
C;Accession: S74286; S19339
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A;Residues: 1-231 <VOE>
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Best Local Similarity
Matches 7; Conserv
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nilarity 100.0%;
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i; Pred. No. 46;
0; Mismatches
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cyclase-like protein hisf [imported] - Staphylococcus aureus (strain N315)
C;Species: Staphylococcus aureus
C;Date: 10-May-2001 #sequence_revision 10-May-2001 #text_change 22-Oct-2001
C;Accession: A99976
R;Kuroda, M; Ohta, T; Uchiyama, I; Baba, T; Yuzawa, H.; Kobayashi, I.; Cui, L.;
ma, A; Mizutani-Ui, Y; Kobayashi, N.; Sawano, T; Inoue, R.; Kaito, C.; Sekimizu,
C.; Shiba, T.; Hattori, M.; Ogasawara, N.; Hayashi, H.; Hiramatsu, K.
Lancet 357, 1225-1240, 2001
A;Title: Whole genome sequencing of meticillin-resistant Stapylococcus aureus.
A;Reference number: A89758; MUID:21311952; PMID:11418146
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A;Title: Complete genome sequence of the alkaliphilic bacterium Bacillus halodurans and A;Reference number: A83650; MUID:20512582; PMID:11058132
A;Accession: B84097
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C;Date: 01-Dec-2000
C;Accession: B84097
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A;Molecule type: DNA
A;Residues: 1-252 <STO>
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100.0%; Pr
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0; Mismatches
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A;Status: preliminary
A;Nolecule type: DNA
A;Residues: 1-252 <KUN>
A;Cross-references: GB:BA000018; PID:gl3702631; PIDN:BAB43771.1; GSPDB:GN00149
A;Experimental source: strain N315
C;Genetics:
A;Gene: hisF
C;Superfamily: cyclase hisF
                                                                                                                                                                                                                                      A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-258 <AQF>
A;Cross-references: GB:AE000672; NID:g2982810; PIDN:AAC06448.1; PID:g2982825; GB:AE00065;
                                                                                                                                                                                                                                                                                                                                                                                                                                  methionyl aminopeptidase - Aquifex aeolicus
C;Species: Aquifex aeolicus
C;Date: 08-May-1998 #sequence_revision 08-May-1998 #text_change 22-Jun-1999
C;Accession: F70307
C;Accession: F70307
R;Deckert, G.; Warren, P.V.; Gaasterland, T.; Young, W.G.; Lenox, A.L.; Grai
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F70307
Search completed: September 29, Job time: 44 secs
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C;Superfamily:
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100.0%; Pred. No.
                  2004, 12:51:18
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          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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        GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
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# ALIGNMENTS

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RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A. Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., A Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., A Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., A Schmerch A., Schein J.E., Jones S.J.M., Marra M.A.; T "Generation and initial analysis of more than 15,000 full-length L Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-97312536; PubMed=9188977; Tsuda E., Goto M., Mochizuki S.-I., Yano K., K Morinaga T., Higashio K.; "Isolation of a novel cytokine from human fiberspecificall."
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Hofbauer L.C., Neubauer A., Heufelder A.E.;
"Receptor activator of nuclear factor-kappaB ligand and
osteoprotegerin: potential implications for the pathoger
treatment of malignant bone diseases.";
Cancer 92:460-470(2001).
-!- FUNCTION: Acts as decoy receptor for RANKL and there
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Emery J.G., McDonnell P., Burke M.B., Deen K.C., I
Dul E., Appelbaum E.R., Eichman C., DiPrinzio R.,
James I.E., Rosenberg M., Lee J.C., Young P.R.;
"Osteoprotegerin is a receptor for the cytotoxic l
J. Biol. Chem. 273:14363-14367(1998).
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MEDLINE-98238645; PubMed-9571159;
Tomoyasu A., Goto M., Fujise N., Mochizuki S.-I., Yas Morinaga T., Tsuda E., Higashio K.;
"Characterization of monomeric and homodimeric forms osteoclastogenesis inhibitory factor.";
Biochem. Biophys. Res. Commun. 245:382-387(1998).
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J. Biol. Chem. 273:5117-5123(1998).
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Morinaga T., Higashio
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loning and expression of osteoprotegerin from Homo sapiens.";
a Biochim. Biophys. Sin. 31:680-684(1999).
its function in osteoclastogenesis. Inhibits the activation of osteoclasts and promotes osteoclast apoptosis in vitro. Bone homeostasis seems to depend on the local RANKL/OPG ratio. May also play a role in preventing arterial calcification. May act as decoy receptor for TRAIL and protect against apoptosis. TRAIL binding blocks the inhibition of osteoclastogenesis. SUBUNIT: Homodimer.

SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Highly expressed in adult lung, heart, kidney, liver, spleen, thymus, prostate, ovary, small intestine, thyroid, lymph node, trachea, adrenal gland, testis, and bone marrow. Detected at very low levels in brain, placenta and skeletal
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058; PubMed=9478964;
Kinosaki M., Goto M., Kobayashi F.,
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InterPro; IPR001368; TNFR_C6.
Pfam; PF00020; TNFR_C6; 3.
SMART; SM00005; DEATH; 4.
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PROSITE; PS00652; TNFR_NGFR_1;
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GO:0005125; F:cytokine activity; TAS.
GO:0004872; F:receptor activity; TAS.
GO:0007165; P:signal transduction; TAS.
GO:00071651; P:skeletal development; TAS.
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PS00652; TNFR_NGFR_1; 1.
PS50050; TNFR_NGFR_2; 2.
RApoptosis; Glycoprotein; Repeat; Signal; Polymorphism.
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STRAIN=BALB/C; TISSUE-Kidney;
STRAIN=BALB/C; TISSUE-Kidney;
MEDLINE=97262071, PubMed=9108485,
MEDLINE=97262071, PubMed=9108485,
Simonet W.S., Lacey D.L., Dunstan C.R., Kelley M., Chang M.-S.,
Luethy R., Nguyen H.Q., Wooden S., Bennett L., Boone T., Sullivan
Devose M., Elliott R., Colombero A., Tan H.-L., Trail D., Pattison
Davy E., Bucay N., Renshaw-Gegg L., Hughes T.M., Hill D., Pattison
Davy E., Sander S., Van G., Tarpley J., Derby P., Lee R.,
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28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Tumor necrosis factor receptor superfamily member 11B precursor (Osteoprotegorin) (Osteoclastogenesis inhibitory factor).
TNFRSF11B OR. OPG OR OCIF.
Mus musculus (Mouse).
Eukaryota; Merarca
   MEDLINE=21060987; PubMed=10952716; Min H., Morony S., Sarosi I., Dunstan Van G., Kasfman S., Kostenuik P.J., Le Simonet W.S.;
                                                                                                                                                                                                       STRAIN=129/Ola, and NIH Swiss; T1
MEDLINE=98382527; PubMed=9714833;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                               and its expression 215:339-343(1998).
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                                                                                                                                                                                                                                                                                                                                    a novel secreted
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                                                                                                                              osteoclastogenesis inhibitory in embryogenesis.";
                                                                                                                                                                                    Nakagawa
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                   Capparelli C., Scully L., Boyle W.J.,
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"Osteoprotegerin reverses osteoporosis by inhibiting endosteal at resembling osteoclastogenesis.";

IL Exp. Med. 192:463-474 (2000).

C -!- FUNCTION: Acts as decoy receptor for RANKL and thereby neutraliz its function in osteoclastogenesis. Inhibits the activation of costeoclasts and promotes osteoclast apoptosis in vitro. Bone osteoclasts seems to depend on the local RANKL/OPG ratio. May al play a role in preventing arterial calcification. May act as decoreceptor for TRAIL and protect against apoptosis. TRAIL binding C receptor for TRAIL and protect against apoptosis. TRAIL binding C INDEXELULIAR LOCATION: Secreted.

-!- TISSUE SPECIFICITY: Highly expressed in liver, lung, stomach, intestines and calvaria. Highly expressed in decidua and placent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; U94331; AAB53708.1; --
EMBL; AB013898; BAAZ8269.1; --
EMBL; AB013899; BAA33388.1; J
EMBL; AB013899; BAA33388.1; J
EMBL; AB013900; BAA33388.1; J
EMBL; AB013901; BAA33388.1; J
EMBL; AB013902; BAA33388.1; J
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SIGNAL
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between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS50017; DEATH DOMAIN; 1.
PROSITE; PS00652; TNFR_NGFR_1; 1.
PROSITE; PS50050; TNFR_NGFR_2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00020; TNFR c6; 3
SMART; SM00005; DEATH; 1.
SMART; SM00208; TNFR; 4.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GO; GO:0005578; C:extracellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGD; MGI:109587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               s SWISS-PROT entry is copyright. It is produced through a collab ween the Swiss Institute of Bioinformatics and the EMBL outst European Bioinformatics Institute. There are no restrictions by non-profit institutions as long as its content is in ified and this statement is not removed. Usage by and for continuous contents and the statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1,25-dihdroxyvitamin D3 and parathyroid SIMILARITY: Contains 4 TNFR-Cys repeats. SIMILARITY: Contains 2 death domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 abdominal aorta and midgut.
INDUCTION: Upregulated by TGF-beta and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEVELOPMENTAL STAGE: Detected in emby whereas expression decreases at day 1 to 17. On day 15 found in developing brachiocephalic artery and ductus art
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
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401
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21 BY SIMILARITY.
01 TUMOR NECROSIS FACTOR RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           decreases at day 11 and ound in developing bone
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SUPERFAMILY MEMBER I
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TIMER-CYS 4.
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DEATH 1.
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May act as decoy
TRAIL binding
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                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Osteoprotegerin: a novel secreted protein involved in of bone density."; Cell 89:309-319(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=97262071; PubMed=9108485; Simonet W.S., Lacey D.L., Dunstan C.R., Kelley M., Chang M.-S., Luethy R., Nguyen H.Q., Wooden S., Bennett L., Boone T., Shimamoto Derose M., Elliott R., Colombero A., Tan H.-L., Trail G., Sullivan Davy E., Bucay N., Renshaw-Gegg L., Hughes T.M., Hill D., Pattison Campbell P., Sander S., Van G., Tarpley J., Derby P., Lee R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Osteoprotegerin).
TNFRSF11B OR OPG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Suggs S., Boyle W.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Embryonic intestine;
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                                                                                                                                                                                                                                        SUBUNIT: Homodimer (By similarity).
SUBCELLULAR LOCATION: Secreted (By similarity).
INDUCTION: Upregulated by osteopontin.
SIMILARITY: Contains 4 TNFR-Cys repeats.
SIMILARITY: Contains 2 death domains.
                                                                                                                                                                                                                                                                                                                                                                osteoclasts and promotes osteoclast apoptosis. Bone how seems to depend on the local RANKL/OPG ratio. May also in preventing arterial calcification. May act as decoy for TRAIL and protect against apoptosis. TRAIL binding inhibition of osteoclastogenesis (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FUNCTION: Acts as decoy receptor for RANKL an its function in osteoclastogenesis. Inhibits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             192
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23; Conserv
                                                  s requires a license agreement (See http://www.isb-sib.ch/announce/
an email to license@isb-sib.ch).
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(Rel. 41,
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       AAB53707.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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Last annotation update)
receptor superfamily member 11B precursor
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Pred. No.
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SWISS)
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NKED (GLCNAC. . .) (POTENTIAL).
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NKED (GLCNAC . . .) (POTENTIAL).
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Best Local S
Matches 22
PIR; A02056; ALHUBR.
HSSP; PO1772; 2FB4.
GO; GO:0005576; C:extracellular; NAS.
GO; GO:0005823; F:antigen binding; NAS.
GO; GO:0006955; P:immune response; NAS.
InterPro; IPR007110; Ig-11ke.
InterPro; IPR00710; Ig-0710; I
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REPEAT
REPEAT
                                                                                                                                                                                                                                                                               SEQUENCE (MYELOMA PROTEIN BUR).
MEDLINE=79151016; PubMed=107164;
Putnam F.W., Liu Y.-S.V., Low T.L.K.;
"Primary structure of a human IgA1 immunoglobulin.
IgA1 protease, digestion, Fab and Fc fragments, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Ig heavy chain V-III region BUR.
Homo sapiens (Human).
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P01773;
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SITE
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PROSITE; PS00652; TNFR_NGFR_1; 1.
PROSITE; PS50050; TNFR_NGFR_2; 2.
Cytokine; Apoptomis; Glycoprotein; Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR000488; Death.
InterPro; IPR001368; TNFR c
Pfam; PF00020; TNFR c6; 4.
SMART; SM00005; DEATH; 1.
SMART; SM00208; TNFR; 4.
                                                                                                                                                                                                      amino acid sequence of the alpha 1 heavy chain.";
J. Biol. Chem. 254:2865-2874(1979).
-!- SIMILARITY: Contains 1 immunoglobulin-like domain
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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TNFR-CYS 2.
TNFR-CYS 3.
TNFR-CYS 4.
DEATH 1.
DEATH 2.
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Pred. No.
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TUMOR NECROSIS FACTOR RECEPTOR
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7.9e-15;
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ID YPAI_CAEEL
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DOMALN 1
MOD RES 11
DISÜLFID 22
CARBOHYD 28
NON TER 119
SEQÜENCE 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a volume between the Swiss Institute of Bioinformatics and the EMBL outset the European Bioinformatics Institute. There are no restrictions the European Bioinformatics Institutions as long as its content is in the content of the European Bioinformatics in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content is in the European Bioinformatics Institutions as long as its content in the European Bioinformatics Institutions as long as its content in the European Bioinformatics Institutions as long as its content in the European Bioinformatics Institutions as long as its content in the European Bioinformatics Institutions as long as its content
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Caenorhabditis elegans.
Cukaryota; Metazoa; Nematoda; Chromadorea;
Eukaryota; Metazoa; Nematoda; Caenorhabditis.
                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                       PROSITE; PS00893; NUDIX; 1. PROSITE; PS01293; UPF0035; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      use by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (APR-1996) to the EMBL/GenBank/DDBJ databases.-!- SIMILARITY: IN THE N-TERMINAL SECTION; BELONGS TO THE HYDROLASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. STRAIN-Bristol N2;
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10-OCT-2003
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01-NOV-1997
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PROSITE; PS50835; IG_LIKE; 1.
                                                                                                                                                                                                                                                                                                 Hypothetical
                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00502; NUDIXFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR000086; NUDIX hydrolase.
InterPro; IPR000059; UPF0035.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WormPep; Y38A8.1; CE07570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hallsworth K.;
                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00293; NUDIX;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: IN THE C-TERMINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FAMILY.
                                                       232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 129 GVVQAGT 135
59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10
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7; Conserv
                                                                                                                  Similarity 7; Conserv
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   VNAESVE 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GVVQAGT 16
                                                                                                                                                                                                                                       188
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llarity 100.0%;
Conservative
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22
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119
                                                                                                               Conservative 0;
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(Rel. 35, Last sequence update)
(Rel. 42, Last annotation update)
UPF0035 protein Y38A8.1 in chromosome
                                                                                                                                                                                                                                                                   protein; Hydrolase
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96
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21317 MW;
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                                                                                                           1.7%; Score 7; DB 1
L00.0%; Pred. No. 18;
ive 0; Mismatches
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                                                                                                                                                                                                                                                                   NUDIX BOX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-LINKED (GLCNAC. . .).
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                                                                                                                                                                                                                                    66CF888F0F12628F CRC64;
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                                                                                                                                       DB 1;
5. 18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rhabditida; Rhabditoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Usage
                                                                                                                                                                      Length 188
                                                                                                                  <u>,,</u>
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                                                                                                                  Indels
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RESULT 6

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                            QBKCBO;
QBKCBO;
QBFEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
18-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-200
                   STRAIN=TLS / ATCC 49652 / DSM 12025;

MEDLINE=22103685; PubMed=12093901;

Eisen I.T., Heidelberg J.F., Wu M.,

Eisen I.A., Nelson K.E., Parlsen I.T., Heidelberg J.F., Wu M.,

Dodson R.J., Deboy R., Gwinn M.L., Nelson W.C., Haft D.H.,

Podson R.J., Deboy R., Gwinn M.L., Nelson W.C., Haft D.H.,

Hickey E.K., Peterson J.D., Durkin A.S., Kolonay J.L., Yang F.,

Holt I., Umayam L.A., Mason T., Brenner M., Shea T.P., Parksey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; U33322; AAA75108.1; -.
HAMAP; MF 00495; atypical; 1.
InterPro; IPR005833; Hlgnase/hydrlase.
InterPro; IPR005834; Hydrolase.
Pfam; PF00702; Hydrolase; 1.
PRINTS; PR00413; HADHALOGNASE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      origin and circadian expression of dnaN in Synechococome PCC 7942.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q55039;
15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Phosphoglycolate phosphatase (EC 3.1.3.18) (PGP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HIS6_CHLTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gene 172:105-109(1996).
-!- CATALYTIC ACTIVITY: 2-phosphoglycolate + H(2)O =
                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                      Bacteria; Chlorobi; Chlorobia; Chlorobiales; Chlorobiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carbohydrate metabolism; Calvin cycle; Hydrolase. SEQUENCE 212 AA; 23572 MW; 8054F39165DECECF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
MEDLINE=96257262; PubMed=8654968;
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                                                                                                                                                                                                                               NCBI_TaxID=1097;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         phosphate.
SIMILARITY: Belongs to the cbbY/cbbZ/gph/yieH family.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VVQAGTP 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.7%;
100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       251
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). 21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 212;
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Parksey D.,
Radune D.,
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RESULT 8
HISG BACHD
ID HISG BAC
ID 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 8-FEB
DT 8-FEB
DT 8-FEB
DT 8-FEB
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DT 18-FEB

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SEQUENCE FROM N.A.
STRAINE-C-125 / JCM 9153;
X MEDLINE-20512582; PubMed=11058132;
X MEDLINE-20512582; PubMed=11058132;
X MEDLINE-20512582; PubMed=11058132;
X MEDLINE-20512582; Nakasone K., Takaki Y., Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HIS6_BACHD
Q9K6Z6;
28-FEB-2003
                                                                                                                                                                                                                                                                                                                                                       28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Imidazole glycerol phosphate synthase subunit hisF (EC 4.1.3.-)
synthase cyclase subunit) (IGP synthase subunit hisF) (ImGP synthase subunit hisF) (IGPS subunit hisF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
    "Complete genome sequence of the alkaliphilic bacterium halodurans and genomic sequence comparison with Bacillus Nucleic Acids Res 28:4317-4331 (2000)
-i- FUNCTION: IGPS catalyzes the conversion of PRFAR and
                                                                                                                                                                                                                                                                                     Bacillus halodurans.
Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                      subunit hisr)
HISF OR BH3578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Histidine biosynthesis; Lyase; Complete proteome ACT_SITE 11 11 POTENTIAL. ACT_SITE 130 130 POTENTIAL.
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InterPro; IPR003009; FMN enzyme.
InterPro; IPR006062; His_biosynth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00977; His biosynth; 1.
TIGRFAMs; TIGR00735; hisF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AE012908; AAM72741.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LVFLDIS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   251 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            53
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                                                                                                                                                                                                                                                                                       Bacillales;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 7;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52A320D7EB04D6E1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                    ., Maeno G., S.
Ogaваwara N.,
                                                                                                                                                                                                                                                                                       Bacillaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gruber T.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
  of PRFAR and glutamine to
                                                                                                                    Sasaki R.
., Kuhara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                       Bacillus
                                                   Bacillus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ketchum K.A.,
                                                                                                               í R
S
                                                                         Bacillus
                                                                                                                                             Masui N.,
                                                   subtilis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
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HIS6 BACSU
ID HIS6_B
AC 034727
DT 15-DEC
DT 15-DEC
DT 10-OCT
DE subuni
GN HISF O
OS Bactir
OC Bacter
OX NCBI T
RN [1]
RA Lazare
RA Lazare
RA Lazare
RA Lazare
RY SEQUEN
RA [2]
RP SEQUEN
RA [2]
RP SEQUEN
RA [2]
RP SEQUEN
RA CATANIN
RA MEDLIN
RA Azeved
RA Azeved
RA BOrris
RA Choi S
RA Denizc
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Best Local S
Matches
                                                                                                                                                                                                                                                                                                                             O34727;
O34727;
15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Imidazole glycerol phosphate synthase subunit hisF (EC 4.1.3.-) (IGP synthase cyclase subunit) (IGP synthase subunit hisF) (ImGP synthase subunit hisF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restructe by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sormend an email to license@isb-sib.ch).
 MMEDLINE=98044033; PubMed=9384377;

Kunst F., Ogasawara N., Moszer I., Albertini A.M., Alloni G.,

Azevedo V., Bertero M.G., Bessieres P., Bolotin A., Borchert S.,

Borriss R., Boursier L., Brans A., Braun M., Brignell S.C., Bron S.,

Brouillet S., Bruschi C.V., Caldwell B., Capuano V., Carter N.M.,

Choi S.K., Codani J.J., Connerton I.F., Cummings N.J., Daniel R.A.,

Denizot F., Devine K.M., Dusterhoft A., Ehrlich S.D., Emmerson P.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
PIR; B
                                                                                                                                                                                       Karamata D.;
"Nucleotide sequence
subtilis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00977; His biosynth; 1.
TIGRFAMs; TIGR00735; hisF; 1.
Histidine biosynthesis; Lyase; Complete
ACT_SITE

11
POTENTIAL.
                                                                                                                      STRAIN=168;
                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                       Submitted
                                                                                                                                                                                                                                                            SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                           Bacillus subtilis.
Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HAMAP; MF_01013; -; 1.
InterPro; IPR003009; FMN_enzyme.
InterPro; IPR006062; His_biosynth.
InterPro; IPR004651; HisF.
                                                                                                                                                                                                                                     Lazarevic V., Soldo
                                                                                                                                                                                                                                                                                        NCBI_TaxID=1423;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IGP, AICAR and glutamate. The hisf subunit catalyzes the cyclization activity that produces IGP and AICAR from PRFAI the ammonia provided by the hisH subunit (By similarity).

CATALYTIC ACTIVITY: 5-[(5-phospho-1-deoxyribulos-1-ylamino)methylideneamino]-1-(5-phosphoribosyl)imidazole-4-carboxamide + L-glutamine = imidazole-glycerol phosphate + aminoimidazol-4-carboxamide ribonucleotide + L-glutamate + PATHMAY: Histidine biosynthesis; fifth step:

SUBUNIT: Heterodimer of hisH and hisF (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic (By similarity).

SIMILARITY: Belongs to the hisA / hisF family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; AP001519; BAB07297.1; -. B84097; B84097.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 100 7; Conservative
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100.0%; Pr
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fi
                                                                                                                                                                                                                                                                                                             Bacillales; Bacillaceae; Bacillus
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                                                                                                                                                                                                        the 300-304
                                                                                                                                                                                                                                          Rivolta
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                                                                                                                                                                       EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POTENTIAL
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                                                                                                                                                                                                                                      c.,
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                                                                                                                                                                                                          Bacillus
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+ H(2)
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RESULT 10
HIS6_STAAM
ID HIS6_STAAM
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RA Fritz C., Fujtta M., Fujtta Y., Fuma S., Galizzi A., Galleron N.,
RA Ghim S.Y., Glaser P., Goffeau A., Golightly E.J., Grandi G.,
RA Guiseppi G., Guy B.J., Haga K., Haiech J., Harwood C.R., Henaut A.,
RA Hilbert H., Holsappel S., Hosono S., Hullo M.F., Itaya M., Jones L.,
RA JOris B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C.,
RA Kurita K., Lapidus A., Lardinois S., Lauber J., Lazarevic V.,
RA Kurita K., Lapidus A., Lardinois S., Lauber J., Lazarevic V.,
RA Kurita K., Lapidus A., Lardinois S., Mauel C., Medigue C.,
RA Medina N., Mellado R.P., Mizuno M., Moestl D., Nakai S., Noback M.,
RA Noone D., O'Reilly M., Ogawa K., Ogiwara A., Oudega B., Park S.H.,
RA Noone D., O'Reilly M., Ogawa K., Ogiwara A., Oudega B., Park S.H.,
RA Parro V., Pohl T.M., Portetelle D., Porwollik S., Prescott A.M.,
RA Presecan E., Pujic P., Purnelle B., Rapport G., Rey M., Reynolds S.,
RA Rigger M., Rivolta C., Rocha E., Roche B., Rose M., Sadaie Y.,
RA Sato T., Scanlan E., Schleich S., Schroeter R., Scoffone F.,
Schiguchi J., Sekowska A., Seror S.J., Serror P., Shin B.S., Soldo B.,
RA Sorokin A., Tacconi E., Takagi T., Takahashi H., Takemaru K.,
RA Viaria N., Wallar R., Wedler E., Wedler H., Weitzenegger T.,
William R., Vanamoto H., Yamane K., Yasumoto K., Yata K.,
Yoshida K., Yoshikawa H.F., Zumstein E., Yoshikawa H., Danchin A.,
The complete genome sequence of the Gram-positive bacterium Bacillus
                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                 Subtilist; BG12600; hisF.

HAMAP; MF_01013; -; 1

InterPro; IPR00309; PMN_enzyme.

InterPro; IPR00662; His_biosynth.

InterPro; IPR004651; HisF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                    Histidine biosynthesis; Lyase; Complete proteome. ACT_SITE 11 11 POTENTIAL. ACT_SITE 130 130 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; Z99121; CAB154:
PIR; B69641; B69641.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                  Pfam; PF00977; His biosynth; 1. TIGRFAMS; TIGR00735; hisr; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF017113; AAC67299.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nature 390:249-256(1997)
                                                                                                                                                   Similarity 7; Conserv
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                                                                                     LVFLDIS
                                                                                                                                                                                                                   130
252 AA;
                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                     CAB15492.1;
     STANDARD;
                                                                                     53
                                                                                                                    15
                                                                                                                                                                                                                   130 P
27294 MW;
                                                                                                                                              1.7%;
100.0%; Pr
0;
                                                                                                                                                   b; Score 7; DB 1
b; Pred. No. 24;
0; Mismatches
     PRT;
                                                                                                                                                                                                                   B4619A119CB0731A CRC64;
     252
                                                                                                                                                                   DB 1;
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+ H(2)0.
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RESULT 11
HIS6_STAAW
ID HIS6_STAAW
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                                                                                                                                                                                                                                                                          C -!- FUNCTION: IGPS catalyzes the conversion of PRFAR and glutamine IGP, AICAR and glutamate. The hisf subunit catalyzes the cyclization activity that produces IGP and AICAR from PRFAR use the cyclization activity that produces IGP and AICAR from PRFAR use the ammonia provided by the hisH subunit (By similarity).

C -!- CATALYTIC ACTIVITY: 5-[(5-phospho-1-deoxyribulos-1-ylamino)methylideneamino)-1-(5-phosphoribosyl)imidazole-4-carboxamide + L-glutamine = imidazole-glycerol phosphate + 5-aminoimidazol-4-carboxamide ribonucleotide + L-glutamate + H(2 - 1- PATHWAY: Histidine blosynthesis; fifth step.

C -!- SUBUNIT: Heterodimer of hisH and hisF (By similarity).

C -!- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
                                                                                                                                                                                             Matches
                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                  EMBL; AP003366; BAB58835.1; -.
EMBL; AP003138; BAB43771.1; -.
PIR, A99976; A99976;
HAWAP; MF 01013; -; 1.
InterPro; IPR003009; FMN_enzyme.
InterPro; IPR006062; His biosynth.
InterPro; IPR004651; HisF:
Pfam; PF00977; His biosynth; 1.
TICRPAMS; TIGR00735; hisF; 1.
                                                                                                                                                                                                                                                                     ACT_SITE
ACT_SITE
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kuroda M., Ohta T., Uchiyama I., Baba T., Yuzawa H., Kobayashi I.,
Cui L., Oguchi A., Aoki K.-I., Nagai Y., Lian J.-C., Ito T.,
Kanamori M., Matsumaru H., Maruyama A., Murakami H., Hosoyama A.,
Mizutani-Ui Y., Takahashi N.K., Sawano T., Inoue R.-I., Kaito C.,
Sekimizu K., Hirakawa H., Kuhara S., Goto S., Yabuzaki J.,
Kanehisa M., Yamashita A., Oshima K., Furuya K., Yoshino C., Shiba T.,
Hattori M., Ogasawara N., Hayashi H., Hiramatsu K.,
"Whole genome sequencing of meticillin-resistant Staphylococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
STRAIN=MU50 / ATCC 700699, and N315;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Imidazole glycerol phosphate synthase subunit hisF (EC synthase cyclase subunit) (ICP synthase subunit hisF) (subunit hisF) (ICP synthase subunit hisF) (ICP synthase subunit hisF) (ICP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Staphylococcus aureus (strain Mu50 / ATCC 700699), Staphylococcus aureus (strain N315). Bacteria, Firmicutes, Bacillales, Staphylococcus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lancet 357:1225-1240(2001).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q99QW8;
28-FEB-2003
                                                                                                                                                                                                                                                                                                                Histidine biosynthesis; Lyase; Complete proteome. ACT_SITE 11 11 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or send an email to license@isb-sib.ch).
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                                                                                                                                   LVFLDIS
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                                                                                                            LVFLDIS
                                                                                                                                                                                                                                                                       130
252 AA;
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27529
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                                                                                                                                                                                         ; Score 7; DB 1
%; Pred. No. 24;
0; Mismatches
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o. 24;
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synthase
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H(2)0.
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STANDARD;

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HISGUIT 12
HISG HISG
AC QBCQ3
DT 15-MA
DT 15-MA
DT 15-MA
DT 15-MA
DT 15-MA
DE Imida
DE spunth
DE subun
GN HISF
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Best Local S
Matches 7
                                                                    HIS6 STAEP
QBCQ92;
15-MAR-2004
15-MAR-2004
15-MAR-2004
15-MAR-2004 (Rel. 43, Created)
15-MAR-2004 (Rel. 43, Last sequence update)
15-MAR-2004 (Rel. 43, Last annotation update)
Inidazole glycerol phosphate synthase subunit hisf (EC 4.1.3.-) (IGP synthase cyclase subunit) (IGP synthase subunit hisf) (ImGP synthase subunit hisf)
                                                                                                                                                                                                                                                                                                                                                                     Histidine
ACT_SITE
ACT_SITE
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
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28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
1midazole glycerol phosphate synthase subunit hisf (EC 4.1.3.-) (IGP synthase cyclase subunit) (IGP synthase subunit hisf) (ImGP synthase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            subunit hisF)
HISF OR MW2592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AP004831; BAB96457.1; -. HAMAP; MF_01013; -; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                acquired MRSA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nagai Y., Iwama N., Asano K., Naimi
Yamamoto K., Hiramatsu K.;
"Genome and virulence determinants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM W.A. PubMed=12044378;
MEDLINE=22040717; PubMed=12044378;
MEDLINE=22040717; PubMed=12044378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bacteria; Firmicutes; Bacillales; Staphylococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Staphylococcus aureus
                                                                                                                                                                                                                                                                                                                                                                                                                                           TIGRFAM8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ancet 359:1819-1827(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FUNCTION: IGPS catalyzes the conversion of PRFAR and glutamine to IGP, AICAR and glutamate. The hisf subunit catalyzes the cyclization activity that produces IGP and AICAR from PRFAR using the ammonia provided by the hisH subunit (By similarity). CATALYTIC ACTIVITY: 5-[(5-phosphor-lodeoxyribulos-1-ylamino)methylideneamino]-1-(5-phosphoribosyl)midazole-4-carboxamide + 1-glutamine = imidazole-glycerol phosphate + 5-aminoimidazol-4-carboxamide ribonucleotide + L-glutamate + H(2)O. PATHMAY: Histidine biosynthesis; fifth step.

SUBUNIT: Heterodimer of hisH and hisF (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic (By similarity).

SIMILARITY: Belongs to the hisA / hisF family.
                                                                                                                                                                                                                                                                                                                                                                                                   PF00977; His biosynth; 1.

AMs; TIGR00735; hisF; 1.

dine biosynthesis; Lyase; Complete proteome.

ITE 11 11 POTENTIAL.
                                                                                                                                                                                                                                 47
                                                                                                                                                                                                                                                        9 LVFLDIS 15
                                                                                                                                                                                                                                                                                                Similarity 7; Conserv
                                                                                                                                                                                                                               LVFLDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IPR003009; FMN_enzyme.
IPR006062; His_biosynth.
IPR004651; HisF.
                                                                                                                                                                                                                                                                                                                                                             11
130
252
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                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                      ΑĄ,
                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                 53
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                                                                                                                                                                                                                                                                                                                                                                      27498 MW;
                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                      1.7%;
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                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                    Score 7; Pred. No
                                                                                                                                                                                                                                                                                                                                                                                        POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                      33F0CA189198F647 CRC64;
                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of high virulence community-
                                                                                                                                                                                                                                                                                                                    o.
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lo. 24;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aoki K.-I., Oguchi A.,
                                                                                                                                                                                                                                                                                                                                    Length 252;
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                                                                                                                                                                                                                                                                                                  Indels
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RA Qin Z.-Q., Miao Y.-G., Wang W.-Y., Chen R.-S., Shen Y.-Chen Z.,
RA Yuan Z.-H., Zhao G.-P., Qu D., Danchin A., Wen Y.-M.;
RA Yuan Z.-H., Zhao G.-P., Qu D., Danchin A., Wen Y.-M.;
RA Yuan Z.-H., Zhao G.-P., Qu D., Danchin A., Wen Y.-M.;
RA Yuan Z.-H., Zhao G.-P., Qu D., Danchin A., Wen Y.-M.;
RT Staphylococcus epidermidis strain (ATCC 1228).";
RI Mol. Microbiol. 49:1577-1593(2003).
RI Mol. Microbiol. 1GPS cattalyzes the conversion of PRFAR and glutamine to CC C. F. FUNCTION: Stratly Troduces IGP and AICAR from PRFAR using CC the ammonia provided by the high subunit (By similarity).
CC -!- CATALYTIC ACTIVITY: 5-[(5-phospho-1-deoxyribulos-1-cc cattalyzes the conversion of the high and high the plosphate + 5-cc cattalyzes the conversion of the step.
CC -!- SUBUNIT: Heterodimer of high and high (By similarity).
-!- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
CC -!- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; ABO16744; AAO03873.1; -.

HAMAP; MF 01013; -; 1.

InterPro; IPR003009; FMN enzyme.

InterPro; IPR004651; His biosynth.

InterPro; IPR00662; His biosynth.

Pfam; PF00977; His biosynth; 1.

TIGRPAMS; TIGR00735; hisF; 1.

Histidine biosynthesis; Lysse; Complete proteome.

ACT_SITE 11 11

ACT_SITE 130 130 POTENTIAL.
                                                                                                                                                                                                   066489;
30-MAY-2000
30-MAY-2000
28-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACT_SITE
ACT_SITE
SEQUENCE
                                                                                                                                                                                                                                                                                               AQUAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinfeites and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentatives requires a license agreement (See http://www.isb-sib.ch/an or send an email to license@isb-sib.ch).
                                                                                                        Bacteria; Aquificae;
NCBI_TaxID=63363;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Staphylococcus epidermidis.
Bacteria; Firmicutes; Bacillales; Staphylococcus.
                                                         STRAIN-VF5;
                                                                                                                                                                 MAP OR AQ_076
                                                                                                                                                                                  Methionine aminopeptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
Deckert G., Warren P.V., Gaasterland T., Young W.G., Lenox A.L.,
Graham D.E., Overbeek R., Snead M.A., Keller M., Aujay M., Huber R.,
                                    MEDLINE=98196666; PubMed=9537320;
                                                                          SEQUENCE FROM N.A.
                                                                                                                             Aquifex aeolicus.
Bacteria; Aquific
                                                                                                                                                                                                                                                                             AMPM_AQUAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=12950922;
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 7; Conserv
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                                                                                                                                                                                                                                                                                                                                                                       LVFLDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130
252 AA;
                                                                                                                                                                                  (Rel. 39, Last sequence update)
(Rel. 41, Last annotation update)
aminopeptidase (EC 3.4.11.18) (MAP)
                                                                                                                                                                                                                                                                                                                                                                                                                                             ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                         (Rel. 39, Created)
                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                       53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27797 MW;
                                                                                                                               Aquificales; Aquificaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                             1.7%; Score 7; DB 100.0%; Pred. No. 24 ive 0; Mismatches
                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36BD6E3D323AAC9A CRC64;
                                                                                                                                                                                                                                                                               258
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
o. 24;
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                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 252
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                                                                                                                                                                                    (Peptidase
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Best Local Similarity
Matches 7; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF0055); ***MAPEPTIDASS.
PRINTS; PR00599; MAPEPTIDASS.
TIGROSOO; met_pdase_I; 1.
TIGRAMs; TIGROSOO; MAP I; FALSE NEG.
PROSITE; PS00680; MAP I; FALSE NEG.
Aminopeptidase; HydroTase; Cobalt; Complete proteome.
COBALT 2 (By similarity).
COBALT 1 AND 2 (By similarity).
COBALT 1 (By similarity).
Fraser C.M.;
"DNA sequence
cholerae.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RLPA VIBCH
Q9KTF4;
                                                        SEQUENCE FROM N.A.

STRAIN-EI TOR N16961 / Serotype 01;

MEDLINE-20406833; PubMed-10952301;

Heldelberg J.F., Eisen J.A., Nelson W.C., Clayton R.A., Gwinn M.L.,

Dodson R.J., Haft D.H., Hickey E.K., Peterson J.D., Umayam L.A.,

Gill S.R., Nelson K.E., Read T.D., Tettelin H., Richardson D.,

Ermolaeva M.D., Vamathevan J., Basses S., Qin H., Dragoi I., Sellers P.,

McDonald L., Utterback T., Fleischmann R.D., Nierman W.C., White O.,

Salzberg S.L., Smith H.O., Colwell R.R., Mekalanos J.J., Venter J.C.,

Fraser C.M., Shith Basses G. B., Shith Basses G.M., Shith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-FEB-2003 (Rel. 41,
28-FEB-2003 (Rel. 41,
10-OCT-2003 (Rel. 42,
RlpA-like lipoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            METAL
SEQUENCE
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InterPro; IPR002467; Pept M24A MAP1.
InterPro; IPR002994; PeptIdase M24.
Pfam; PF00557; PeptIdase M24; I.
PRINTS; PR00599; MAPEPTIDASE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bacteria; Proteobacteria;
Vibrionaceae; Vibrio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AE000672; AAC06448.1; -. PIR; F70307; F70307.
                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=666;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vibrio cholerae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VC0948.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEROPS; M24.001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nature 392:353-358(1998).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION: Removes the amino-terminal methionine from nasce proteins (By similarity)

CATALYTIC ACTIVITY: Release of N-terminal amino acids, preferentially methionine, from peptides and arylamides. COFACTOR: Cobalt; binds 2 ions per subunit (By similarity) SIMILARITY: Belongs to peptidase family M24A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                302 LPGKKVG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
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                                   poth
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176
211
242
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence up 
Last annotation 
precursor.
                                   chromosomes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gammaproteobacteria; Vibrionales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence update)
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COBALT 1 AND 2 (By similarity).
COBALT 1 (By similarity).
COBALT 1 (By similarity).
COBALT 1 AND 2 (By similarity).
My; D2EE530C81D09C07 CRC64;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                   õ
                                   the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           263
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
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                                   cholera
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                            pathogen Vibrio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
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RESULT 15
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Best Local S
Matches 7
                                                                                                                                       This SWISS-PROT entry is copyright. It is produced throubetween the Swiss Institute of Bioinformatics and the the Buropean Bioinformatics Institute. There are no reuse by non-profit institutions as long as its contempodified and this statement is not removed. Usage by
                                                                                            entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN=ATCC 30957 / WB;
MEDLINE=88089405; PubMed=3335828;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-APR-1990 (Rel. 14, Created)
01-APR-1990 (Rel. 14, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation updat
Surface antigen CRP170 (Fragment).
Giardia lamblia (Giardia intestinalis).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C170
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LIPID
LIPID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF03330; Lipoprotein_13; 1.
Pfam; PF05035; SPOR; 2.
TIGREAMS; TIGR00413; rlpA; 2.
PROSITE; PS00013; PROKAR LIPOPROTEIN; 1.
Hypothetical protein; Membrane; Lipoprotein; Signal;
                         EMBL; X06741; CAA29
PIR; A42125; A42125
                                                                                                                                                                                                                                                                                                                                                                                        Adam R.D., Aggarwal A., Nash T.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
PIR; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Diplomonadida; Hexamitidae; Giardiinae; Giardia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-APR-1990
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-I- SUBCELLULAR LOCATION: Attached to the membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=5741;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P15799;
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Complete prot
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InterPro; IPR000437; Prok_lipoprot_S.
InterPro; IPR007730; SPOR.
                                                                                                                                                                                                                                                                                                                                        "Antigenic variation of a cysteine-rich protein in J. Exp. Med. 167:109-118(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TIGR; VC0948;
                                                                                                                                                                                                                                                                                                                  Exp. Med. 167:10
- MISCELLANEOUS:
                                                                                                                                                                                                                                                                                           protein.
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263 AA;
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                                                  CAA29916.1;
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RIPA-LIKE LIPOPROTEIN.

RIPA-LIKE LIPOPROTEIN.

N-palmiroyl cysteine (Potential)

S-diacylglycerol cysteine (Poten;

3E5B2E7BD67050EE CRC64;
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                                                                                                                                                                                                                                                                                                                  antigenically variant surface
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                                                                                                                                                                                                                                                                                                                                                                                                               la Cruz V.F.,
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                                                                                                                     (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
                                                                                                                                                                   There are no restrictions ng as its content is in
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DR InterPro; IPR009030; Grow_fac_recep.

DR SMART; SM00261; FU; 3.

KW Repeat; Antigen.

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PT REPEAT 38 102

PT REPEAT 328 328

SQ SEQUENCE 328 AA; 33438 MW; 373A697A30EDCA21 CRC64;

Query Match
Best Local Similarity 100.0%; Pred. No. 30;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 107 CKEGRYL 113

Db 240 CKEGRYL 246

Search completed: September 29, 2004, 12:48:27

Job time: 26 secs
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Result
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Gapop 60.0 , Gapext 60.0
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1: sp_archea:*

2: sp_bacteria:*

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sp_mammal:*
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Q9v5p6 drosophila
Q81c26 bacillus ce
Q7zzy4 gallus gall
Q7zzy5 gallus gall
Q7zzy5 gallus gall
Q8tb89 homo sapien
Q8fq28 vibrio para
Q8c2w6 mus musculu
Q99m85 mus musculu
Q99m85 mus musculu
Q99m85 mus musculu
Q99m87 homo sapien
Q8fq3d homo sapien
Q8fq3d homo sapien
Q94837 giardia lam
Q24963 giardia lam
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	240	233	228	228	217	209	206	205	204	202	202	195	195	195	191	190	183	180	170	169	165	163	139	128	110	102	102	96	69
t	<u>۔</u>	N	5	N	16	w	N	12	16	16	16	16	16	11	16	16	16	17	16	11	16	9	17	10	10	v	w	w	N
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\$ 000 mm		Q9jpa6 rhodocyclus	Q88x99 lactobacill	Q84fs0 helicobacte	Q81q90 bacillus an	Q874a3 clavispora	Q9reel bartonella		Q9ckb4 pasteurella		Q8e7a5 streptococc		Q99u28 staphylococ	Q9cvt9 mus musculu	Q98kk7 rhizobium l		Q9k7j9 bacillus ha		Q8z0k6 anabaena sp	Q9jke0 rattus norv	Q97ed7 clostridium	Q85714 mycobacteri	Q97w16 sulfolobus		Q9lnm6 arabidopsis	Q8sul4 encephalito		Q8j0n1 saccharomyc	O33067 mycobacteri

## ALIGNMENTS

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RESULT 2

Q81CZ6

ID Q81C

AC Q81C

DT 01----

DT 01---

RESULT 3
Q7ZZY4
ID Q7ZZ
AC Q7ZZ
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RA Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Ments S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
RA Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Strong R., Sun E.,
RA Syiskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Stang G., Zhao Q., Zheng I.,
RA Zheng X.H., Zhong F.N., Zhong W., Zhong G., Zhao Q., Zheng L.,
RA Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu S., Zhu X., Smith H.O.,
RA Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.;
"The genome sequence of Drosophila melanogaster.";
RT "The genome sequence of Drosophila melanogaster.";
RMBL, AE003828; AAF58753.1; -.
RMBL, AE003828; Non100: 1.

DR RFMEL, BF04135. Non100: 1.
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Q7ZZY4;
01-JUN-2003
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SEQUENCE FROM N.A.
MEDLINE-22608415; PubMed-12721630;
MEDLINE-22608415; PubMed-12721630;
Ivanova N., Sorokin A., Anderson I., Galleron N., Candelon B.,
Kapatral V., Bhattacharyya A., Reznik G., Mikhailova N., Lapidus A.,
Kapatral V., Bhattacharyya A., Reznik G., Mikhailova N., Walunas T.,
Chu L., Mazur M., Goltsman E., Larsen N., D'Souza M., Walunas T.,
Chu L., Mazur M., Goltsman E., Fonstein M., Ehrlich S.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q81CZ6;
Q81CZ6;
01-JUN-2003
01-JUN-2003
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Grechkin Y., Pusch G., Haselkorn R., Overbeek R., Kyrpides N.;
"Genome sequence of Bacillus cereus Bacillus anthracis.";
Nature 423:87-91(2003).
EMBL; AE017006; AAP09549.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                     Complete proteome.
SEQUENCE 109 AA; 12642 MW; 1AFE9B1C1797AD43 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacillus cereus (strain ATCC 14579 / DSM 31).
Bacteria, Firmicutes, Bacillales, Bacillaceae, Bacillus.
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VCE 64 AA; 7634 MW;
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8; Conservative
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(TrEMBLrel. 24, Last annotation update)
      (TrEMBLrel. 24,
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Pred. No. 4.8;
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                                                                                          SEQUENCE FROM N.A.

Bridgham J.T., Johnson A.L.;

R Bridgham J.T., Johnson A.L.;

"DCR3 expression in the hen.";

"DCR3 expression in the EMBL/GenBank/DDBJ databases.

EMBL; AY251406; AAP03889.1; -.

GO; GO:0004872; F:receptor activity; IEA.

R GO; GO:0004872; F:receptor activity; IEA.

R InterPro; IPR006209; EGF like.

R InterPro; IPR001368; TNFR_C6.

R Pfam; PF00020; TNFR C6; 2.

R SMART; SM00208; TNFR; 4.

R PROSITE; PS01186; EGF 2; 1.

R PROSITE; PS01562; TNFR_NGFR_1; 1.

R PROSITE; PS00652; TNFR_NGFR_2; 1.
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O1-JUN-2003 (TrEMBLrel. 24
01-JUN-2003 (TrEMBLrel. 24
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Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Phasianidae; Phasianidae; Phasianidae; Phasianidae; Phasianinae;
                                                                            Receptor.
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                                                                                                                                                                                                                                                     Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasiani
                                                                   SEQUENCE
                                                                                                                                                                                                                                      NCBI_TaxID=9031;
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                            Similarity
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186 AA;
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                             Conservative
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20671 MW;
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Q87Q28;
01-JUN-2003
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MEDLINE-22508454; PubMed-12620739;

Makino K., Oshima K., Kirokawa K., Yokoyama K., Uda T., Tagomori K.,

Iijima Y., Najima M., Nakano M., Yamashita A., Kubota Y., Kimura S.,

Yasunaga T., Honda T., Shinagawa H., Hattori M., Iida T.;

"Genome sequence of Vibrio parahaemolyticus: a pathogenic mechanism
distinct from that of V. cholerae.";

Lancet 361:743-749(2003).
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01-JUN-2003 (TrEMBLrel. 24, Last seg
01-OCT-2003 (TrEMBLrel. 25, Last ann
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01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Similar to tangerin (Fragment).
Homo sapiens (Human).
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Vibrionaceae; Vibrio.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
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269 AA;
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larity 100.0%; Pred. No.
Conservative 0; Mismatch
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Mismatches
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RESULT 8
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Best Local
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Q8C2W6;
01-MAR-2003
                                                                                                                                                                                                                                                                                                                                      Q99MS6;
                                                                                                                                          Submitted (SEP-2000) to the EMBL; AF305089; AAX32111.1; HSSP; Q01082; 1BKR.
                                                                                                                                                                                                                                                                                                     01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2003 (TrEMBLrel. 24,
                                                                                                 InterPro; IPR001715; Calponin-like
pfam; pr00307; CH; 1.
SMART; SM00033; CH; 1.
prOSITE; P850021; CH; 1.
                                                                                                                                                                              STRAIN-BALB/c;
Melichar J.M., Noegel A.A.,
"Tangerin, a novel Golgi-ass
domain and CAAX-box.";
                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMART; SM00033; CH; 1.
PROSITE; PS50021; CH; 1.
NON_TER 1 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation 60,770 full-length cDNAs."; Nature 420:563-573(2002).
Nature 420:563-573(2002).
                                                                                       SEQUENCE
                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                            NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                           Tangerin C.
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MEDLINE=22354683; PubMed=12466851;
The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10090;
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Mammalia; Eutheria;
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01-JUN-2003
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MGD; MGI:1341841; Kcnk7.
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 623
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8; Conserv
OLRSLMES
                     QLRSLMES 301
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                                                                                      759 AA;
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                                            Conservative
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Rodentia;
                                                                                       83948 MW;
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                                           2.0%; Score 8; DB
100.0%; Pred. No. 28
:ive 0; Mismatches
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Last sequence update)
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                                                                                                                                                                                       Korenbaum E.;
sociated protein with calponin-homology
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Last
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                                                                                      8770323D25E707B4 CRC64
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o. 28;
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o. 26;
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Q99MS5
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AC Q99M
DT 01-J
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DT TANG
OC Euka
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OC MGEN
RC STRA
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Query Match
Best Local Similarity
Matches 8; Conserv
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Best Local
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Q99MS5;
01-JUN-2001
01-JUN-2001
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                               Q99J97 PRELIMINARY; PRT; 874 AA.
Q99J97;
01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Tangerin B (Similar to KIAA0903 protein).
                                                  PfAm; PF00307; CH; 1.
SMART; SM00033; CH; 1.
PROSITE; PS50021; CH; 1.
SEQUENCE 874 AA; 95560 MW;
                                                                                                                                                                                                        STRAIN=BALB/c;
Melichar J.M., Noegel A.A., Korenbau
Melichar J.M., Noegel A.G., Korenbau
"Tangerin, a novel Golgi-associated
domain and CAAX-box.";
Submitted (SEP-2000) to the EMBL/Ger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00307; CH; 1.
SMART; SM00033; CH; 1.
PROSITE; PS50021; CH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Melichar J.M., Noegel A.A., Korenbaum E.;
"Tangerin, a novel Golgi-associated protein with calponin-homology domain and CAAX-box.";
Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AF305090; AAK32112.1; -.
HSSP; Q01082; IBKR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                     HSSP; Q01082; 1BKR.
InterPro; IPR001715; Calponin-like
                                                                                                                             EMBL; AF305088; AAK32110.1;
EMBL; BC004660; AAH04660.1;
                                                                                                                                                     Strausberg R.;
Submitted (MAR-2001) to the
                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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2.0%; So larity 100.0%; I Conservative 0;
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Rodentia;
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 Score 8; DB 1; Pred. No. 31; 0; Mismatches
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Last annotation update)
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Pred. No.
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                                                    94803958BCDF5B6D CRC64;
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DE HYPOT
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OC Eukax
OC Mammad
OX NCBI
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Matches 8
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Q9H7M7;
                                                                     Bloecker H., Boecher M., Brandt P., Mewes H.W., Weil B., Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases EMBL; ALB34433; CADD39033.1; -. Interpro; IPR001715; Calponin-like.
                                                                                                                                                                                                                                                                                                                                                                                                                           Q8N3D4;
01-OCT-2002 (TrEMBLrel.
01-OCT-2002 (TrEMBLrel.
01-JUN-2003 (TrEMBLrel.
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Homo sapiens (Human).
Homo sapiens (Human).
Toria; Metazoa; Chordata; "
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SMART; SM00033; CH; 1.
PROSITE; PS00402; BPD TRANSP_INN_MEMBR;
PROSITE; PS50021; CH; 1.
  Hypothetical protein
                       SMART; SM00033; CH; 1.
PROSITE; PS50021; CH; 1.
                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                            Hypothetical protein DKFZP762C186.
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HSSP; Q01082; 1BKR.
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                                                                                                                                                                                                    TISSUE=Melanoma;
                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000515; BPD_transp.
InterPro; IPR001715; Calponin-like
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GO:0005215; F:transporter act
GO:0006810; P:transport; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1279
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8; Conserv
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eotide sequence of
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(TrEMBLrel. 24, Last annotation update)
protein (Fragment).
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100.0%; Pred. No. 48,
ative 0; Mismatches
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Primates;
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a long cDNA
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                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             043616 PRELIMINARY; PRT; 65 AA.
043616, PRELIMINARY; PRT; 65 AA.
01-JUN-1998 (TrEMBLrel. 06, Created)
01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                 TISSUE-Hepatoma; Ljubimova J.Y., Demetriou A.A.; "A novel gene associated with liver cirrhosis and neoplasia, Patent, pending."; bubmitted (JAN-1988) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NON TER
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Pfam; PP00307; CH; 1.
SMART; SM00033; CH; 1.
PROSITE; PS50021; CH; 1.
SEQUENCE 1716 AA; 184834 MW; CE
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                                                                                                                                            EMBL; AI
                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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HSSP; Q01082; 1BKR.
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
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Last annotation update)
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Score 7;
Pred. No.
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Sciurognathi; Muridae; Murinae; Mus
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   DB 4;
o. 36;
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5. 57;
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Eukaryota; Diplomonadida; Hexamitidae; Giardiinae; Giardia.
NCBI_TaxID=5741;
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Q94837; PTEBS-1997 (TrEMBLrel. 02, Creat
01-FEB-1997 (TrEMBLrel. 02, Last
01-MAR-2003 (TrEMBLrel. 23, Last
                                                                                                                                          Nucleic Acids Res. 22:2102-2
EMBL; L25060; AAA57226.1; -.
                                                                                                                                                                                                          STRAIN-WBA6;
                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                           Variant-specific surface protein
                                                                                                                                                       "Allele-specific expression of a variant-specific surface protein (VSP) of Giardia lamblia.";
Nucleic Acids Res. 22:2102-2108(1994).
                                                                                                                                                                                               MEDLINE=94301794; PubMed=8029018;
                                                                                                                                                                                     Yang Y., Adam R.D.;
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Perfect score:
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ALIGNMENTS

## Sequence 1, Application US/09153927A Patent No. 6297022 GENERAL INFORMATION: APPLICANT: McDonnell, Peter C. APPLICANT: McDonnell, Peter R. APPLICANT: Young, Peter R. APPLICANT: Young, Peter R. APPLICANT: Zou, Jun TITLE OF INVENTION: A Method of Identifying Agonists and TITLE OF INVENTION: Antagonists for Tumor Necrosis Related Receptors TR1, TR3 TITLE OF INVENTION: Antagonists for Tumor Necrosis Related Receptors TR1, TR3 TITLE OF INVENTION: MOBER: US/09/153,927A CURRENT APPLICATION NUMBER: US/09/153,927A CURRENT FILING DATE: 1998-09-16 EARLIER APPLICATION NUMBER: 60/061,334 EARLIER FILING DATE: 1997-10-08 NUMBER OF SEQ ID NOS: 11 SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 1 LENGTH: 401 TYPE: PRT ORGANISM: Human US-09-153-927-1 US-09-153-927-1 Query Match Best Local Similarity Matches 401; Conserv 181 301 241 181 121 121 61 61 VCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRYLEIEFCLK 120 1 MNKLLCCALVFLDISIKWTTQETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKT SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKT KRQHSSQEQTFQLLKLMKHQNKDQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLME HDNICSGNSESTQKCGIDVTLCEEAFFRFAVPTKFTPNWLSVLVDNLPGTKVNAESVERI HRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNAT VCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRYLEIEFCLK MNKLLCCALVFLDISIKWTTQETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKT HDNICSGNSESTQKCGIDVTLCEEAFFRFAVPTKFTPNWLSVLVDNLPGTKVNAESVERI HRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNAT 100.0%; Score 401; ilarity 100.0%; Pred. No. 0; Conservative 0; Mismatches Mismatches DВ ω • 0, Length 401; Indels 0; Gaps 120 300 300 240 180 180 60 0

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APPLICANT: Nichael R. Brigham-Burke
APPLICANT: Peter R. Young
ITITLE OF INVENTION: A METHOD OF IDENTIFYING AGONIST AND
ITITLE OF INVENTION: ANTAGONISTS FOR TUMOR NECROSIS RELATED RECEPTORS TR1 AND TR2
FILE REFERENCE: GH-50030
CURRENT APPLICATION NUMBER: US/09/072,993C
CURRENT FILING DATE: 1998-05-06
PRIOR APPLICATION NUMBER: 60/055,513
PRIOR FILING DATE: 1997-08-13
PRIOR FILING DATE: 1997-08-13
PRIOR FILING DATE: 1997-08-26
PRIOR FILING DATE: 1997-08-26
PRIOR FILING DATE: 1997-08-29
NUMBER: OF SEQ ID NOS: 9
SOFTWARE: FastSEQ for Windows Version 3.0
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                    Sequence 5, Application US/10039785
Patent No. 6538938
GENERAL INFORMATION:
APPLICANT: Salcedo et al.
TITLE OF INVENTION: Antibodies that Immunospecifically Bind to TRAIL
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Pred. No. 0;
0; Mismatches
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; Sequence 6, Application US/08974022
; Patent No. 6015938
; GENERAL INFORMATION:
APPLICANT: Boyle, Willaim J.
APPLICANT: Lacey, David L.
APPLICANT: Calzone, Frank J.
APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: OSTEOPROTEGER.

OSTEOPROTEGERIN

US-08-974-022-6

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PRIOR FILING DATE: 2001-12-20
PRIOR APPLICATION NUMBER: 60/331,310
PRIOR FILING DATE: 2001-11-14
PRIOR APPLICATION NUMBER: 60/331,044
PRIOR FILING DATE: 2001-11-07
PRIOR APPLICATION NUMBER: 60/327,364
PRIOR APPLICATION NUMBER: 60/327,364
PRIOR FILING DATE: 2001-09
PRIOR APPLICATION NUMBER: 60/323,807
PRIOR APPLICATION NUMBER: 60/323,807
PRIOR FILING DATE: 2001-09-21
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Best Local S
Matches 401
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SEQ ID NO 5
LENGTH: 401
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FILE REFERENCE: PF550
CURRENT APPLICATION NUMBER: US/10/039,785
CURRENT FILING DATE: 2002-05-07
PRIOR APPLICATION NUMBER: 60/369,860
PRIOR FILING DATE: 2002-04-05
PRIOR FILING DATE: 2002-04-05
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PRIOR APPLICATION NUMBER: 60/293,473
PRIOR FILING DATE: 2001-05-25
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Local Similarity 100.0%;
ses 401; Conservative 0;
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FILING DATE: 2001-08-02
APPLICATION NUMBER: 60/294,981
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VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL 401
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CORRESPONDENCE ADDRESS: NUMBER OF SEQUENCES:

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ADDRESSEE:

Amgen Inc. 40 Dehavilland

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Sequence 12, Application US/09042785A
Patent No. 6194151
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Busfield, Samantha J
TITLE OF INVENTION: NOVEL MOLECULES OF
TITLE OF INVENTION: AND USES THEREFOR
NUMBER OF SEQUENCES: 31
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NAME: Winter, Robert B.
REFERENCE/DOCKET NUMBER: A-
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 401 amino acids
TYPE: amino acid
TYPE: amino acid
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Best Local Similarity
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/974,022
FILLING DATE: 12-DEC-1995
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CITY: Thousand Oaks
STATE: California
COUNTRY: USA
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APPLICATION NUMBER:
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MEDIUM TYPE: Floppy disk
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CLASSIFICATION:
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llarity 99.8%;
Conservative
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Pred. No. 9.4e-288;
0; Mismatches 1;
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                                    THE TNF RECEPTOR SUPERFAMILY
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Sequence 6, Application US/08795445A
Patent No. 6284485
GENERAL INFORMATION:
APPLICANT: Boyle, Willaim J.

RESULT 6 US-08-795-445A-6

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INFORMATION FOR SEQ ID NO: 12
SEQUENCE CHARACTERISTICS:
LENGTH: 401 amino acids
TYPE: amino acid
TOPOLOGY: linear
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Best Local Similarity 99.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0.
CURRENT APPLICATION DATA:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
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MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
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CITY: Boston
STATE: Massac
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                                                                               SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLWHALKHSKTYHFPKT 360
                                                                                                                            KRQHSSQEQTFQLLKLWKHQNKAQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLME 300
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Pred. No. 9.4e-288;
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Lacey, David L.

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RESULT 7
US-08-795-447A-6
; Sequence 6, Application US/08795447A
; Patent No. 6284728
; GENERAL INFORMATION:
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NAME: Winter, Robert B.
REFERENCE/DOCKET NUMBER: P
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Flopy disk
COMPUTER: IBM PC compatible
COMPUTER: FIRM PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
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APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: OSTEOPROTEGERIN
NUMBER OF SEQUENCES: 53
CORRESPONDENCE ADDRESS:
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PRIOR APPLICATION DATA:
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CITY: Thousand Oaks
STATE: California
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STREET: 1840 Dehavilland Drive
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ZIP: 91320-1789
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amino acid
OGY: linear
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Pred. No. 9.4e-288;
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US-08-974-186-6

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Sequence 6, Application US/08974186
Patent No. 6284740
GENERAL INFORMATION:
APPLICANT: Boyle, Willaim J.
APPLICANT: Lacey, David L.

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Best Local Similarity 99.0
A 400; Conservative
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NAME: Winter, Robert B.
REFERSNCE/DOCKET NUMBER:
INFORMATION FOR SEQ ID NO: 6
SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Boyle, William J.
APPLICANT: Lacey, David L.
APPLICANT: Calzone, Frank J.
APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: Osteoprotegerin
NUMBER OF SEQUENCES: 53
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TYPE: amino acid
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CLASSIFICATION: 514
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                                                                      SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKT
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Pred. No. 9.4e-28B;
0; Mismatches 1;
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                                                           RESULT 9
US-08-795-446B-6
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Sequence 6, Application
Patent No. 6288032
GENERAL INFORMATION:
APPLICANT: Boyle, Wi
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Matches
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
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ATTORNEY/AGENT INFORMATION:
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APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: OSTEOPROTEGERIN
NUMBER OF SEQUENCES: 53
CORRESPONDENCE ADDRESS:
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TYPE: amino acid
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STREET: 1840 Dehavilland
CITY: Thousand Oaks
STATE: California
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Similarity 99.8%;
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Boyle, Willaim J.
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Best Local Similarity
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REFERENCE/DOCKET NUMBER:
INFORMATION FOR SEQ ID NO:
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STATE: California
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
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PRIOR APPLICATION DATA
APPLICATION NUMBER:
FILING DATE:
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MEDIUM TYPE: Floppy disk
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               VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL
                                                                              SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKT
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Pred. No. 9.4e-288;
0; Mismatches 1;
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RESULT 10 US-08-706-945D-128

Sequence 128, Application US/08706945D Patent No. 6369027 GENERAL INFORMATION:

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Sequence 6, Application US/08577788C
Patent No. 6613544
GENERAL INFORMATION:
APPLICANT: Boyle, William
APPLICANT: Boyle, William
APPLICANT: Charg, Ming-Shi
APPLICANT: Charg, Ming-Shi
TITLE OF INVENTION: Osteoprotegerin
FILE REFERENCE: A-378 Rev
CURRENT APPLICATION NUMBER: US/08/577,788C
CURRENT FILING DATE: 1995-12-22
NUMBER OF SEQ ID NOS: 58
SOFTWARE: Patentin version 3.1
SEQ ID NO 6
LENGTH: 401
TYPE: PRT
ORGANISM: Homo sapiens
US-08-577-788C-6
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APPLICANT: Lacey, David
APPLICANT: Calzone, Frank
APPLICANT: Calzone, Frank
APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: Osteoprotegerin
FILE REFERENCE: A-378CIP
CURRENT APPLICATION NUMBER: US/08/706,945D
CURRENT FILING DATE: 1996-09-03
PRIOR APPLICATION NUMBER: 08/577,788
PRIOR APPLICATION NUMBER: 08/577,788
PRIOR FILING DATE: 1995-12-22
NUMBER OF SEQ ID NOS: 145
SOFTWARE: Patentin version 3.1
SEQ ID NO 128
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US-08-577-788C-6
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US-08-706-945D-128
 Query Match
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Best Local Similarity 99.8%;
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TYPE: PRT
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 Score 300;
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APPLICANT: Boyle, William
APPLICANT: Lacey, David
APPLICANT: Calzone, Frank
APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: Osteoprotegerin
FILE REFERENCE: A-378 Rev
CURRENT APPLICATION NUMBER: US/08/577,788C
CURRENT FILING DATE: 1995-12-22
NUMBER OF SEQ ID NOS: 58
SOFTWARE: PATENTIN Version 3.1
SEQ ID NO 56
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TYPE: PRT
ORGANISM: Homo sapiens
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HDNICSGNSESTQKCGIDVTLCEEAFFRFAVPTKFTPNWLSVLVDNLPGTKVNAESVERI
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Pred. No. 9.4e-288;
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CURRENT APPLICATION NUMBER: US/09/527,236A
CURRENT FILING DATE: 2000-03-16
PRIOR APPLICATION NUMBER: 60/052,991
PRIOR FILING DATE: 1997-06-11
PRIOR APPLICATION NUMBER: 09/095,094
PRIOR APPLICATION NUMBER: 09/126,019
PRIOR FILING DATE: 1998-06-10
PRIOR APPLICATION NUMBER: 60/126,019
PRIOR APPLICATION NUMBER: 60/134,220
PRIOR FILING DATE: 1999-03-14
PRIOR FILING DATE: 1999-05-14
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US-09-632-277A-3
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US-09-632-277A-3
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APPLICANT: HSu, Hailing
APPLICANT: HSu, Hailing
TITLE OF INVENTION: NTR3 A No. 6599716el Member of the TNF-Receptor Supergene Family
FILE REFERENCE: 01017/35549A
CURRENT APPLICATION NUMBER: US/09/632,277A
CURRENT FILING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: US 60/147,297
PRIOR FILING DATE: 1999-08-04
NUMBER OF SEQ ID NOS: 4
                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 20, Application US/09527236A Patent No. 6358508
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 3, Application US/09632277A
Patent No. 6599716
                                                                                                                                                                                                                            APPLICANT: Ni, Jian
APPLICANT: Yu, Guo-Liang
APPLICANT: Fan, Ping
APPLICANT: Gentz, Reiner L.
TITLE OF INVENTION: Human Tumor Necrosis Factor Receptor TR9
FILE REFERENCE: PF375P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Ver. 2.0
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TYPE: PRT
ORGANISM: Mus musculus
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US-09-756-854-20
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US-09-756-854-20
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GENERAL INFORMATION:
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SOFTWARE: PatentIn Ver. :
SEQ ID NO 20
LENGTH: 147
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TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                             TELEFAX: 301-309-8439 INFORMATION FOR SEQ ID NO: 20:
                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/095,094
FILING DATE: «Unknown»
ATTORNEY/AGENT INFORMATION:
NAME: HOOVER, Kenley K.
REGISTRATION NUMBER: 40,302
REFERENCE/DOCKET NUMBER: PF375
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/756,854
FILING DATE: 10-Jan-2001
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS: Human Genome Sciences, Inc.
STREET: 9410 Key West Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gentz, Reiner
TITLE OF INVENTION: Human Tumor Necrosis Factor Receptor TR9
NUMBER OF SEQUENCES: 26
             MOLECULE TYPE: protein SEQUENCE DESCRIPTION:
                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 147 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Ni, Jian
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STATE: MD
COUNTRY: US
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                                                                    TYPE: amino acid
STRANDEDNESS: single
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                                                  TOPOLOGY: linear
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100.0%;
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Search co Job time	Db	γ	<b>В</b>	γo	Db	Ş	Best Lo Matche
Search completed: September 29, 2004, 12:51:54 Job time : 33 secs	121 CRKHTNCSVFGLLLTQKGNATHDNICS 147	160 CRKHTNCSVFGLLLTQKGNATHDNICS 186	61 THNRVCECKEGRYLEIEFCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAP 120	100 THNRVCECKEGRYLEIEFCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAP 159	1 LCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNR 60	40 LCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNR 99	Best Local Similarity 100.0%; Pred. No. 3.6e-137; Matches 147; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*

2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*

3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*

4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*

5: /cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*

6: /cgn2_6/ptodata/2/iaa/backfIles1.pep:*
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Maximum Match 100%
Listing first 45 summaries
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  GenCore version (c) 1993 - 2004
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                                                          US-09-153-927-1
US-09-072-993C-1
US-10-039-785-5
US-08-974-022-6
US-08-974-186-6
US-08-975-447A-6
US-08-975-447A-6
US-08-795-447A-6
US-08-795-447A-186-6
US-08-795-447A-186-6
US-08-795-447A-2
US-08-974-788C-56
US-08-974-022-2
US-08-974-186-2
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5, Appli
6, Appli
7, Appli
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344	406	435.5	436.5	444	444	444	827	859	861	865	865	945	1030	1728	1900	1900	1900
15.6	18.5	19.8	19.8	20.2	20.2	20.2	37.6	39.0	39.1	39.3	39.3	43.0	46.8	78.5	86.4	86.4	86.4
258	146	299	211	300	300	300	139	174	146	147	147	161	208	364	401	401	401
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US-09-579-845-9	US-09-523-323-59	US-09-286-529-17	US-09-286-529-20	US-09-523-323-52	US-09-632-277A-2	US-08-794-796-2	US-08-706-945D-130	US-08-706-945D-136	US-09-523-323-58	US-09-756-854-20	US-09-527-236A-20	US-09-632-277A-3	US-08-577-788C-50	US-08-706-945D-141	US-08-577-788C-54	US-08-577-788C-4	US-08-706-945D-126
Sequence 9, Appl	Sequence 59, Ap	Sequence 17, Appl	•	Sequence 52, Ap	Sequence 2, Appl	Sequence 2, Appl:	Sequence 130, A	Sequence 136, App	Sequence 58, Ap	Sequence 20, Ap	Sequence 20, Ap	Sequence 3, Appl	Sequence 50, App	Sequence 141, Ap	Sequence 54, App	Sequence 4, Appl	Sequence 126, App

ALIGNMENTS

## GENERAL INFORMATION: APPLICANT: Young, Peter C. APPLICANT: Young, Peter-R. APPLICANT: Zou, Jun TITLE OF INVENTION: A Method of Identifying A TITLE OF INVENTION: Antagonists for Tumor Nec TITLE OF INVENTION: And TRS FILE REFERENCE: GH50031 CURRENT APPLICATION NUMBER: US/09/153,927A CURRENT FILING DATE: 1998-09-16 EARLIER APPLICATION NUMBER: 60/061,334 EARLIER TILING DATE: 1997-10-08 NUMBER OF SEQ ID NOS: 11 SOFTWARE: FASTSEQ for Windows Version 3.0 SEQ ID NO 1 ; TYPE: PRT ; ORGANISM: Human US-09-153-927-1 RESULT 1 US-09-153-927-1 Sequence 1, Application US/09153927A Patent No. 6297022 Matches 401; Query Match Best Local Similarity LENGTH: 401 301 241 241 181 181 HDNICSGNSESTOKCGIDVTLCEEAFFRFAVPTKFTENWLSVLVDNLPGTKVNAESVERI 121 121 HRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNAT 61 61 VCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRYLBIBFCLK 120 1 MNKLLCCALVFLDISIKWTTQETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKT 1 MNKLLCCALVFLDISIKWTTQETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKT SLPGKKVGABDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKT KRQHSSQEQTFQLLKLWKHQNKDQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLME 300 HRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNAT VCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRYLEIEFCLK HDNICSGNSESTQKCGIDVTLCEEAFFRFAVPTKFTPNWLSVLVDNLPGTKVNAESVERI 100.0%; Score 2200; DB 3; ilarity 100.0%; Pred. No. 3.2e-193; Conservative 0; Mismatches 0; Identifying Agonists and for Tumor Necrosis Related Indels Length 401; Receptors TR1, <u>,,</u> 240 240 180 120 360 180 60 TR3

Sequence Sequence Sequence Sequence

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APPLICANT: Michael R. Brigham-Burke
APPLICANT: Michael R. Young
TITLE OF INVENTION: A METHOD OF IDENTIFYING AGONIST AND
TITLE OF INVENTION: ANTAGONISTS FOR TUMOR NECROSIS RELATED RECEPTORS TR1 AND TR2
FILE REFERENCE: GH-50030
CURRENT FILING DATE: 1998-05-06
PRIOR APPLICATION NUMBER: 00/055,513
PRIOR APPLICATION NUMBER: 60/055,513
PRIOR APPLICATION NUMBER: 60/056,980
PRIOR FILING DATE: 1997-08-13
PRIOR APPLICATION NUMBER: 60/057,550
PRIOR FILING DATE: 1997-08-26
PRIOR FILING DATE: 1997-08-29
NUMBER OF SEQ ID NOS: 9
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 1
TYPE: BPT
ORGANISM: HOMO SAPIENS
US-09-072-993C-1
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US-10-039-785-5
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Sequence 5, Application US/10039785
PATENT NO. 6538938
GENERAL INFORMATION:
APPLICANT: Salcedo et al.
APPLICANT: Salcedo et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 100.0%; Score 2200; DB 4; Best Local Similarity 100.0%; Pred. No. 3.2e-193; Matches 401; Conservative 0; Mismatches 0;
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 ; Sequence 6, Application US/08974022; Patent No. 6015938; GENERAL INFORMATION: Boyle, Willaim J.; APPLICANT: Boyle, Willaim J.; APPLICANT: Calzone, Frank J.; APPLICANT: Chang, Ming-Shi; APPLICANT: Chang, Ming-Shi; TITLE OF INVENTION: OSTEOPROTEGERIN
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NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PATENTIN VEX. 2.1
; SEQ ID NO 5
; LENGTH: 401
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-039-785-5
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CURRENT FILING DATE: 2002-05-07
PRIOR APPLICATION NUMBER: 60/369,860
PRIOR FILING DATE: 2002-04-05
PRIOR FILING DATE: 2001-12-20
PRIOR APPLICATION NUMBER: 60/31,310
PRIOR FILING DATE: 2001-11-14
PRIOR PILING DATE: 2001-11-14
PRIOR PILING DATE: 2001-11-07
PRIOR APPLICATION NUMBER: 60/331,044
PRIOR FILING DATE: 2001-10-09
PRIOR PILING DATE: 2001-10-09
PRIOR APPLICATION NUMBER: 60/327,364
PRIOR APPLICATION NUMBER: 60/327,364
PRIOR APPLICATION NUMBER: 60/329,367
PRIOR APPLICATION NUMBER: 60/329,97
PRIOR APPLICATION NUMBER: 60/309,176
PRIOR APPLICATION NUMBER: 60/309,176
PRIOR APPLICATION NUMBER: 60/309,176
PRIOR APPLICATION NUMBER: 60/294,981
PRIOR PILING DATE: 2001-06-04
PRIOR PILING DATE: 2001-06-04
PRIOR APPLICATION NUMBER: 60/293,473
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Matches 401; Conserv
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Sequence 12, Application US/09042785A
Patent No. 6194151
Patent No. 6194151
GENERAL INFORMATION:
APPLICANT: Busfield, Samantha J
TITLE OF INVENTION: NOVEL MOLECULES OF THE TNF RECEPTOR SUPERFAMILY
TITLE OF INVENTION: AND USES THEREFOR
NUMBER OF SEQUENCES: 31
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Matches
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NAME: Winter, Robert B.
REFERENCE/DOCKET NUMBER:
INFORMATION FOR SEQ ID NO: 6.
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION DATA:
APPLICATION UMBER: US/08/974,022
FILING DATE: 12-DEC-1995
CLASSIFICATION:
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APPLICATION NUMBER:
FILING DATE:
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CITY: Thousand Oaks
STATE: California
COUNTRY: USA
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Similarity 99.8%;
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INFORMATION FOR SEQ ID NO: 12
SEQUENCE CHARACTERISTICS:
LENGTH: 401 amino acids
TYPE: amino acid
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MEDIUM TYPE: Floppy
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COMPUTER: IBM PC compatible
COMPUTER: IBM PC COMPATIBLE
COPERATING SYSTEM: PC-DOS/MS-DOS
COPERATOR DESCRIPTION OF THE PC-DOS/MS-D
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CITY: Boston
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Local Similarity 99.8%;
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RESULT 6
US-08-795-445A-6
; Sequence 6, Application US/08795445A
; Patent No. 6284485
; GENERAL INFORMATION:
; APPLICANT: Boyle, Willaim J.

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RESULT 7
US-08-795-447A-6
; Sequence 6, Application
; Patent No. 6284728
; GENERAL INFORMATION:
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REFERENCE/DOCKET NUMBER:
INFORMATION FOR SEQ ID NO: 6
SEQUENCE CHARACTERISTICS:
LENGTH: 401 amino acids
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TOPOLOGY: linear
MOLECULE TYPE: prot
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ZIP: 91320-1789
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: OSTEOPROTEGERIN
NUMBER OF SEQUENCES: 53
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ATTORNEY/AGENT INFORMATION:
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STREET: 1840 Dehavilland
CITY: Thousand Oaks
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Pred. No. 1.7e-192;
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ATTORNEY/AGENT INFORMATION:
NAME: Winter, Robert B.
REFERENCE/DOCKET NUMBER: /
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 401 amino acids
TYPE: amino acid
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Best Local Similarity
Matches 400; Conserv
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CORRESPONDENCE ADDRESS:
ADDRESS:
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MEDIUM TYPE: Floppy disk
COMPUTER: IM PC compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
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CITY: Thousand Oaks
STATE: California
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ZIP: 91362-1789
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VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL
                  VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL 401
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Lacey, David L.
Calzone, Frank J.
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Pred. No. 1.7e-192;
0; Mismatches 1;
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RESULT 8 US-08-974-186-6

Sequence 6, Application US/08974186
Patent No. 6284740
GENERAL INFORMATION:
APPLICANT: Boyle, Willaim J.
APPLICANT: Lacey, David L.

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RESULT 9
US-08-795-446B-6
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          Sequence 6, Application US/08795446B Patent No. 6288032 GENERAL INFORMATION:
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Best Local
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NAME: Winter, Robert B.
REFERENCE/DOCKET NUMBER:
INFORMATION FOR SEQ ID NO: 6
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
APPLICANT:
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APPLICATION NUMBER:
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STREET: 1840 Dehavilland
CITY: Thousand Oaks
STATE: California
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TANYENTION: OSTBODROTEGERIN
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Pred. No. 1.7e-192;
0; Mismatches 1;
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Best Local Similarity
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REFERENCE/DOCKET NUMBER:
INFORMATION FOR SEQ ID NO: (
SEQUENCE CHARACTERISTICS:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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APPLICANT: Calzone, Frank J.
APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: OSTEOPROTEGERIN
NUMBER OF SEQUENCES: 53
CORRESPONDENCE ADDRESS:
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TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
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PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Re-lease #1.0,
CURRENT APPLICATION DATA:
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CITY: Thousand Oaks
STATE: California
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                  VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL 401
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VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL
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milarity 99.8%;
Conservative
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Pred. No. 1.7e-192;
D; Mismatches 1;
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RESULT 10 US-08-706-945D-128

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180 180 120

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Sequence 128, Application US/08706945D Patent No. 6369027 GENERAL INFORMATION:

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GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Boyle, William
APPLICANT: Calzone, Frank
APPLICANT: Calzone, Frank
APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: Osteoprotegerin
FILE REFERNCE: A-378 Rev
CURRENT APPLICATION NUMBER: US/08/577,788C
CURRENT FILING DATE: 1995-12-22
NUMBER OF SEQ ID NOS: 58
SOFTMARE: Patentin version 3.1
SEQ ID NO 6
LENGTH: 401
TYPE: PAT
ORGANISM: Homo sapiens
US-08-577-788C-6
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APPLICANT: Calzone, Frank
APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: OSteoprotegerin
FILE REFERENCE: A-378CIP
CURRENT APPLICATION NUMBER: US/08/706,945D
CURRENT FILING DATE: 1996-09-03
PRIOR APPLICATION NUMBER: 08/577,788
PRIOR APPLICATION NUMBER: 08/577,788
PRIOR FILING DATE: 1995-12-22
NUMBER OF SEQ ID NOS: 145
SOFTWARE: PATENTIN Version 3.1
SEQ ID NO 128
LENGTH: 401
TYPE: PRT
ORGANISM: Homo sapiens
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US-08-577-788C-6
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 Query Match
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Best Local Similarity 99.8%;
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Pred. No. 1.7e-192;
 Score 2192;
 DB 4;
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Length 401;
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APPLICANT: Boyle, William
APPLICANT: Lacey, David
APPLICANT: Calzone, Frank
APPLICANT: Calzone, Frank
APPLICANT: Chang, Ming-Shi
FITLE OF INVENTION: Osteoprotegerin
FILE REFERENCE: A-378 Rev
CURRENT APPLICATION NUMBER: US/08/577,788C
CURRENT FILING DATE: 1995-12-22
NUMBER OF SEQ ID NOS: 58
SOFTWARE: PatentIn version 3.1
SEQ ID NO 56
LENGTH: 401
TYPE: PRT
ORGANISM: Homo sapiens
US-08-577-788C-56
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Best Local S
Matches 400
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Pred. No. 1.7e-192;
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GENERAL INFORMATION:
APPLICANT: Boyle, William
APPLICANT: Lacey, David
APPLICANT: Calcone, Frank
APPLICANT: Calcone, Frank
APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: Osteoprotegerin
FILE REFERENCE: A-378CIP
CURRENT FILING DATE: 1996-09-03
PRIOR APPLICATION NUMBER: 09/877,788
PRIOR APPLICATION 1995-12-22
NUMBER OF SEQ ID NOS: 145
SOFTWARE: Patentin version 3.1
SEQ ID NO 142
LENGTH: 364
TYPE: PRT
ORGANISM: Mus musculus
 RESULT 14
US-08-974-022-2
; Sequence 2, Application US/08974022
; Patent No. 6015938
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; MOLECULE TYPE: protein US-08-974-022-2
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PA PC COMPATION
COMPUTER: PATENT PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
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APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: OSTEOPROTEGERIN
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ADDRESSEE: Amgen Inc
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TOPOLOGY:
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CITY: Thousand Oaks
STATE: California
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1840 Dehavilland Drive
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86.3%; Pred. No. 5e-167;
tive 25; Mismatches 28;
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Application US/08795445A

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Patent No. 6284485
GENERAL INFORMATION:
APPLICANT: Boyle, Willaim J.
APPLICANT: Lacey, David L.
APPLICANT: Calzone, Frank J.
APPLICANT: Chang, Ming-Shi
TITLE OF INVENTION: OSTEOPROTEGERIN
NUMBER OF SEQUENCES: 53
CORRESPONDENCE ADDRESS:
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PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/577,788

FILING DATE:

ATTORNEY/AGENT INFORMATION:

NAME: Winter, Robert B.

REFERENCE/DOCKET NUMBER: A-378

REFERENCE/DOCKET NUMBER: A-378

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 401 amino acids

TYPE: TYPE: protein
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MEDIUM TYPE: Floppy disk
COMPUTER: ISM PC compatible
COMPUTER: ISM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION NUMBER: US/08/795,445A
APPLICATION NUMBER: US/08/795,445A
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STREET: 1840 Dehavilland D
CITY: Thousand Oaks
STATE: California
COUNTRY: USA
ZIP: 91320-1789
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                            TVTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL 401
                                                                                    ESLPGKKISPDEIERTRKTCKPSEQLLKLLSLWRIKNGDQDTLKGLMYALKHLKAYHFPK
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Search completed: September 29, 2004, 12:35:02 Job time : 34 secs

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US-10-147-653-2
US-09-062-113-63
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US-10-785-114-73
US-10-232-858-79
US-10-232-858-79

Sequence 8, Appli Sequence 2, Appli Sequence 63, Appl Sequence 64, Appl Sequence 65, Appl Sequence 65, Appl Sequence 66, Appl Sequence 66, Appl Sequence 67, Appl Sequence 68, Appl Sequence 68, Appl Sequence 69, Appl Sequence 69, Appl Sequence 61, Appl Sequence 61, Appl Sequence 62, Appl Sequence 63, Appl Sequence 64, Appl Sequence 65, Appl Sequence 66, Appl Sequence 67, Appl Sequence 68, Appl Sequence 68, Appl Sequence 69, Appl Sequence 69, Appl Sequence 79, Appl Sequence 73, Appl Sequence 73, Appl Sequence 73, Appl Sequence 73, Appl Sequence 79, Appl Sequence 79,

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Maximum Match 100%
Listing first 45 summaries
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1: /cgn2_6/ptodata/2/pubpaa/US07 PUBCOMB.pep:*

2: /cgn2_6/ptodata/2/pubpaa/US06 NEW PUB.pep:*

3: /cgn2_6/ptodata/2/pubpaa/US06 NEW PUB.pep:*

4: /cgn2_6/ptodata/2/pubpaa/US07 NEW PUB.pep:*

5: /cgn2_6/ptodata/2/pubpaa/US07 NEW PUB.pep:*

6: /cgn2_6/ptodata/2/pubpaa/US08 NEW PUB.pep:*

6: /cgn2_6/ptodata/2/pubpaa/US08 NEW PUB.pep:*

7: /cgn2_6/ptodata/2/pubpaa/US08 PUBCOMB.pep:*

9: /cgn2_6/ptodata/2/pubpaa/US08 PUBCOMB.pep:*

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18: /cgn2_6/ptodata/2/pubpaa/US10 NEW PUB.pep:*
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12 US-10-105-934-2

13 US-10-039-785-5

13 US-10-064-592-2

14 US-10-044-674-3

14 US-10-044-674-3

14 US-10-139-785-5

14 US-10-139-785-5

14 US-10-139-785-5

14 US-10-139-785-5

15 US-10-364-045-1

16 US-10-364-045-1

17 US-10-364-045-1

18 US-10-375-076-1

19 US-10-785-119-5

19 US-10-785-114-5

10 US-09-405-032-125
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ALIGNMENTS

RELATED PROTEIN FAMILY AND THE T85-RELATED  NUMBER OF SEQUENCES: 18  CORRESPONDENCE ADDRESS: ADDRESSE: Fish & Richardson P.C. STREBT: 225 Franklin Street CITY: Boston STATFS: MA COUNTRY: USA ZIP: 02110-2804 COMPUTER READABLE FORM: MEDIUM TYPE: Diskette COMPUTER: IBM Compatible OPERATING SYSTEM: DOS SOFTWARS: FastSDG for Windows Version 2.0 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/10/105,934 FILLING DATE: 15-MRA-2002 PRIOR APPLICATION NUMBER: US/09/062,389 FILLING DATE: 10-OCT-1997 APPLICATION NUMBER: 50/044,746 FILLING DATE: 18-ARP-1997 APPLICATION NUMBER: 60/064,746 FILLING DATE: 18-ARP-1997 ATTORNEY/AGENT INFORMATION: NAME: Meiklejohn, Anita L. REGISTRATION WIMBER: 35,283 REFERENCE/DOCKET NUMBER: 09404/051001 TELECOMMUNICATION INFORMATION:	
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CURRENT APPLICATION NUMBER: US/10/039,785
CURRENT FILING DATE: 2002-05-07
PRIOR APPLICATION NUMBER: 60/369,860
PRIOR FILLING DATE: 2002-04-05
PRIOR APPLICATION NUMBER: 60/341,237
PRIOR FILLING DATE: 2001-12-20
PRIOR PILLING DATE: 2001-11-14
PRIOR FILLING DATE: 2001-11-14
PRIOR PILLING DATE: 2001-11-07
PRIOR APPLICATION NUMBER: 60/331,310
PRIOR APPLICATION NUMBER: 60/331,044
PRIOR FILLING DATE: 2001-10-07
PRIOR APPLICATION NUMBER: 60/327,364
PRIOR FILLING DATE: 2001-10-09
PRIOR PILLING DATE: 2001-09-21
PRIOR APPLICATION NUMBER: 60/323,807
PRIOR APPLICATION NUMBER: 60/323,807
PRIOR APPLICATION NUMBER: 60/323,807
PRIOR APPLICATION NUMBER: 60/329,176
PRIOR APPLICATION NUMBER: 60/309,176
PRIOR APPLICATION NUMBER: 60/394,981
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TELEX: 200154

INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 401 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 5, Application US/10039785 Publication No. US20020067646A1 GENERAL INFORMATION:
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Salcedo et al.
TITLE OF INVENTION: Antibodies that Immunospecifically Bind to TRAIL
TITLE OF INVENTION: Receptors
FILE REFERENCE: PF550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: protein FRAGMENT TYPE: internal SEQUENCE DESCRIPTION: SI
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TELEFAX: 617/542-8906
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; TYPE: PRT; ORGANISM: HOMO SAPIENS US-10-066-209-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-066-209-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1, Application US/10066209
Publication No. US20020115110A1
GENERAL INFORMATION:
                                                                                                                                  PRIOR FILING DATE: 1997-08-29
NUMBER OF SEC ID NOS: 9
SOFTWARE: FASTSEC for Windows Version
SEC ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/293,473
PRIOR FILING DATE: 2001-05-25
NUMBER OF SEQ ID NOS: 66
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 5
LENGTH: 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 401; Conservative 0
Query Match
Best Local Similarity
                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 09/072,993
PRIOR FILING DATE: 1998-05-06
PRIOR APPLICATION NUMBER: 60/055,513
PRIOR FILING DATE: 1997-08-13
PRIOR APPLICATION NUMBER: 60/056,980
PRIOR FILING DATE: 1997-08-26
PRIOR APPLICATION NUMBER: 60/057,550
                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Brigham-Burke, Michael R.
APPLICANT: Young, Peter R.
TITLE OF INVENTION: A METHOD OF IDENTIFYING AGONIST
TITLE OF INVENTION: ANTAGONISTS FOR TUMOR NECROSIS
FILE REFERENCE: GH-50030-D1
CURRENT APPLICATION NUMBER: US/10/066,209
CURRENT FILING DATE: 2001-10-25
                                                                                                                LENGTH: 401
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Pred. No. 8.2e-178;
  Score 2200; DB 13; Pred. No. 8.2e-178;
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Sequence 2, Application US/10164592

Publication No. US20020150989A1

GENERAL INFORMATION:

APPLICANT: Greene, John M.

APPLICANT: Fleischmann, Robert D.

FILE REFERENCE: 1488.0710007

CURRENT APPLICATION NUMBER: US/10/164,592

CURRENT FILING DATB: 2002-06-10

PRIOR APPLICATION NUMBER: US 08/469,637

PRIOR FILING DATE: 1995-06-06

PRIOR FILING DATE: 1995-03-15

PRIOR FILING DATE: 1995-03-15

PRIOR FILING DATE: 1995-03-15

SOPTWARE: Patentin version 3.1
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US-10-164-592-2
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APPLICANT: Denton, R. Rex
APPLICANT: Bieglecki, Karyn M
APPLICANT: Nandabalan, Krishnan
APPLICANT: Nandabalan, Krishnan
APPLICANT: Stephens, J. Claiborne
TITLE OF INVENTION: HAPLOTYPES OF THE TNFRSF11B GENE
FILE REFERENCE: TNFRSF11B MMH-0001US (CIP)
CURRENT APPLICATION NUMBER: US/10/044,674
CURRENT FILING DATE: 2002-01-09
PRIOR APPLICATION NUMBER: PCT/US00/18803
PRIOR FILING DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 94
SOFTWARE: PatentIn version 3.1
RESULT 6
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US-10-044-674-3
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US-10-044-674-3
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Matches 401; Conserv
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Gaps

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360

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240

300

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CURRENT APPLICATION NUMBER: US/10/322,673
CURRENT FILING DATE: 2002-12-19
PRIOR APPLICATION NUMBER: 60/341,237
PRIOR FILING DATE: 2001-12-20
PRIOR PRIOR PAPLICATION NUMBER: 60/369,877
PRIOR FILING DATE: 2002-04-05
PRIOR APPLICATION NUMBER: 60/384,828
PRIOR FILING DATE: 2002-06-04
PRIOR FILING DATE: 2002-06-04
PRIOR APPLICATION NUMBER: 60/396,591
PRIOR APPLICATION NUMBER: 60/396,591
PRIOR APPLICATION NUMBER: 60/403,370
PRIOR APPLICATION NUMBER: 60/403,370
PRIOR FILING DATE: 2002-08-15
PRIOR FILING DATE: 2002-11-13
NUMBER: OF SEQ ID NOS: 72
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US-10-139-785-5
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; SEQ ID NO 5
; LENGTH: 401
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-322-673-5
                                                         Sequence 5, Application US/10139785
Publication No. US20030190685A1
GENERAL INFORMATION:
APPLICANT: Salcedo et al.
TITLE OF INVENTION: Antibodies that Immunospecifically
TITLE OF INVENTION: Receptors
FILE REFERENCE: PF550
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Publication No. US20030180296A1
GENERAL INFORMATION:
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Best Local (
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TITLE OF INVENTION: Antibodies that Immunospecifically
TITLE OF INVENTION: Receptors
FILE REFERENCE: PF585
CURRENT APPLICATION NUMBER: US/10/139,785
CURRENT FILING DATE: 2002-05-07
PRIOR APPLICATION NUMBER: 60/369,860
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PRIOR FILING DATE: 2001-12-20
PRIOR APPLICATION NUMBER: 60/331,310
PRIOR FILING DATE: 2001-11-14
PRIOR APPLICATION NUMBER: 60/331,044
PRIOR FILING DATE: 2001-11-07
PRIOR APPLICATION NUMBER: 60/327,364
PRIOR FILING DATE: 2001-10-09
PRIOR PRIOR PRIOR DATE: 2001-09-21
PRIOR FILING DATE: 2001-09-21
PRIOR FILING DATE: 2001-09-21
PRIOR APPLICATION NUMBER: 60/309,176
PRIOR APPLICATION NUMBER: 60/294,981
PRIOR APPLICATION NUMBER: 60/294,981
PRIOR FILING DATE: 2001-06-04
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PRIOR FILING DATE: 2001-05-25
NUMBER OF SEQ ID NOS: 66
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 5
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TYPE: PRT
ORGANISM: Homo E
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                                                                      SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKT
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VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL
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US-09-062-113-5
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Patent No. US20020051969A1
GENERAL INFORMATION:
                                    APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
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APPLICANT:
APPLICANT:
   APPLICANT:
GOTO, Masaaki
TSUDA, Eisuke
MOCHIZUKI, Shin'ichi
YANO, Kazuki
YANO, Kazuki
KOBAYASHI, Fumie
KOBAYASHI, Fumie
SHIMA, NO. US2002051969Aluyuki
YASUDA, Hisataka
NAKKGAWA, NO. US20020051969Aluaki
MORINAGA, Tomonori
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LOCATION: -21..0
OTHER INFORMATION: /
US-09-062-113-5
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FILING DATE: 20-FEB-101
ATTORNEY/AGENT INFORMATION:
NAME: MOORE, Ronda P.
REGISTRATION NUMBER: 44,244
REFERENCE/DOCKET NUMBER: FJN-060DV
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 1000
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Best Local Similarity
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/062,113
FILING DATE: 17-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: 3
FILING DATE: 21-JUL-1
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TITLE OF INVENTION:
NUMBER OF SEQUENCES:
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                                                       121 HRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNAT 180
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                                 HRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNAT 180
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20-FEB-1996
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Pred. No. 2.2e-177;
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APPLICANT: Okada, Junichi
APPLICANT: Kurihara, Atsushi
APPLICANT: Numazawa, Taku
APPLICANT: Kondo, Junichi Tsuda
APPLICANT: Mochizuki, Shinichi
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CURRENT FILING DATE: 2002-06-27
PRIOR APPLICATION NUMBER: UP 2001-198985
PRIOR FILING DATE: 2001-06-29
NUMBER OF SEQ ID NOS: 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Miyazaki, Hideki
TITLE OF INVENTION: A complex comprising OCIF
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                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: mat peptide LOCATION: (+1)...(+380) OTHER INFORMATION:
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OTHER INFORMATION:
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ORGANISM: Homo sapiens
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| KRQHSSQEQTFQLLKLMKHQNKDQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLME
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Pred. No. 2.2e-177;
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APPLICANT: Okada, Junichi
APPLICANT: Kurihara, Atsushi
APPLICANT: Kumazawa, Taku
APPLICANT: Numazawa, Taku
APPLICANT: Mochizuki, Shinichi
APPLICANT: Nishi, Hirotaka
APPLICANT: Nishi, Hirotaka
APPLICANT: Miyazaki, Hideki
TITLE OF INVENTION: A comprising OCIF and polysaccharide
FILE REPERENCE: 02280/HG
CURRENT APPLICATION NUMBER: US/10/364,045
CURRENT FILING DATE: 2003-02-11
DEFIDE ASSETTICATION NUMBER: US/10/364,045
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PRIOR FILING DATE: 2002-06-27
PRIOR APPLICATION NUMBER: JP 2001-198985
PRIOR FILING DATE: 2001-06-29
NUMBER OF SEQ ID NOS: 1
SOFTWARE: PatentIn version 3.1
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NAME/KEY: mat peptide
LOCATION: (+1)..(+380)
OTHER INFORMATION:
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LOCATION: (-21)..(-1)
OTHER INFORMATION:
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ORGANISM: Homo sapiens
FEATURE:
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Similarity 99.8%;
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SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKT 360
                                  KRQHSSQEQTFQLLKLWKHQNKDQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLME
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Pred. No. 2.2e-177;
O; Mismatches 1;
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CURRENT APPLICATION NUMBER: US/10/232,858
CURRENT FILING DATE: 2002-09-03
PRIOR APPLICATION NUMBER: PCT/AP96/00374
PRIOR FILING DATE: 1996-02-20
PRIOR APPLICATION NUMBER: 08/915,004
PRIOR APPLICATION NUMBER: 08/915,004
PRIOR FILING DATE: 1997-08-20
NUMBER OF SEQ ID NOS: 108
SOPTWARE: PATENTIN VERSION 3.1
SEQ ID NO 5
LENGTH: 401
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Best Local Similarity 99.8%;
Matches 400; Conservative
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APPLICANT: TSUD
APPLICANT: MOCH
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TITLE OF INVENTION: No. US20030153048A1el Proteins and Methods for Producing the Prote
FILE REFERENCE: 16991.004
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ORGANISM: Homo sapiens
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VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL
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KOBAYASHI, Fumie
SHIMA, No. US20030153048Aluyuki
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NAKAGAWA, No. US20030153048Aluaki
MORINAGA, Tomonori
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HIGASHIO, Kanji
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pred. No. 2.2e-177;
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APPLICANT: Kumakura, Seiichiro
APPLICANT: Nakajima, Tomoko
TITLE OF INVENTION: A Pharmaceutical Composition
FILE REFERENCE: 03117/HG
CURRENT APPLICATION NUMBER: US/10/377,076
CURRENT FILING DATE: 2003-02-28
PRIOR APPLICATION NUMBER: JP 2002-055356
PRIOR FILING DATE: 2002-03-01
NUMBER OF SEQ ID NOS: 1
SOFTWARE: Patentin version 3.1
SEQ ID NO 1
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   APPLICANT: GOTO, Masaaki APPLICANT: TSUDA, Eisuke APPLICANT: MOCHIZUKI, Sh. APPLICANT: YANO, Kazuki APPLICANT: KOBAYASHI, Fur APPLICANT: SHIMA, Nobuyul
                                                                                                          Sequence 5, Application US/10785109 Publication No. US20040142426A1 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/10377076 Publication No. US20030216297A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 99.8%; Score 2195; DB 15; Best Local Similarity 99.8%; Pred. No. 2.2e-177;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: mat_peptide LOCATION: (+1)..(+380) OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: SIGNAL LOCATION: (-21)..(-1) OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
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TSUDA, Eiguke
MCCHIZUKI, Shin'ichi
YANO, Kazuki
KOBAYASHI, Fumie
SHIMA, Nobuyuki
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; LENGTH: 401
; TYPE: PRT
; ORGANISM: Homo s
US-10-785-109-5
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APPLICANT: HIGASHIO, Kanji
TITLE OF INVENTION: Novel Proteins and Methods for Producing the
FILE REFERENCE: 16991.017
CURRENT APPLICATION NUMBER: US/10/785,109
CURRENT FILING DATE: 2004-02-25
PRIOR APPLICATION NUMBER: US 10/232,858
PRIOR APPLICATION NUMBER: US 08/915,004
PRIOR FILING DATE: 1997-08-20
PRIOR APPLICATION NUMBER: US 08/915,004
PRIOR FILING DATE: 1996-02-20
PRIOR APPLICATION NUMBER: US 08/915,004
PRIOR APPLICATION NUMBER: US 207508/1995
PRIOR FILING DATE: 1995-07-21
PRIOR APPLICATION NUMBER: US 207508/1995
PRIOR FILING DATE: 1995-02-20
PRIOR FILING DATE: 1995-02-20
PRIOR FILING DATE: 1995-02-20
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Best Local Similarity 99.8%;
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APPLICANT:
APPLICANT:
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                          VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL 401
                                                                                  SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKT
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MORINAGA, Tomonori
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Pred. No. 2.2e-177;
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GENERAL INFORMATION:
APPLICANT: GOTO, MASSAKİ
APPLICANT: TSUDA, EİSUKE
APPLICANT: YANO, Kazuki
APPLICANT: YANO, Kazuki
APPLICANT: KOBAYASHI, Fum
APPLICANT: SHIMA, NOBUYUK
APPLICANT: YASUDA, HİSATA

Shin'ichi

TSUDA, Eisuke
MCCHIZUKI, Shin'i
YANO, Kazuki
KOBAYASHI, Fumie
SHIMA, Nobuyuki
YASUDA, Hisataka

NAKAGAWA, Nobuaki

RESULT 14 US-10-785-114-5

Sequence 5, Application US/10785114 Publication No. US20040143859A1

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APPLICANT: UEDA, Mesateugur APPLICANT: HIGASHIO, Kanji
ITITLE OF INVENTION: Novel Proteins and Methods for Producing the Proteins
FILE REFERENCE: 16991.016
CURRENT APPLICATION NUMBER: US/10/785,114
CURRENT FILING DATE: 2004-02-25
PRIOR APPLICATION NUMBER: US 10/232,858
PRIOR APPLICATION NUMBER: US 09/915,004
PRIOR FILING DATE: 1997-08-20
PRIOR FILING DATE: 1997-08-20
PRIOR APPLICATION NUMBER: PCT/JP96/00374
PRIOR APPLICATION NUMBER: PCT/JP96/00374
PRIOR APPLICATION NUMBER: PCT/JP96/00374
PRIOR APPLICATION NUMBER: PCT/JP96/00374
PRIOR APPLICATION NUMBER: DP 207508/1995
PRIOR APPLICATION NUMBER: DP 307508/1995
PRIOR APPLICATION NUMBER: DP 307508/1995
PRIOR APPLICATION NUMBER: JP 307508/1995
PRIOR APPLICATION NUMBER: JP 307508/1995
PRIOR PILING DATE: 1995-07-21
PRIOR PILING DATE: 1995-02-20
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US-09-405-032-125
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-785-114-5
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                                                                                                                                                                                                              Sequence 125, Applicate Publication No. US2003 GENERAL INFORMATION
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Best Local (
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SOFTWARE: PatentIn version 3.1
CORRESPONDENCE ADDRESS:
ADDRESSEE: Amgen Inc.
STREET: 1840 Dehavilland Drive
CITY: Thousand Oaks
STATE: California
COUNTRY: United States
ZIP: 91320
                                                                                                                                                APPLICANT: Amgen Inc.
TITLE OF INVENTION: OSTEOPROTEGERIN
NUMBER OF SEQUENCES: 168
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Similarity 99.8%;
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COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PATENTIN Release #1.0, Version #1.

CURRENT APPLICATION DATA:

APPLICATION UNMBER: US/09/405,032

FILING DATE: 24-Sep-1999

CLASSIFICATION: UNAROWND

ATTORNEY/AGENT INFORMATION:

NAME: Winter, Robert B.

REFERENCE/DOCKET NUMBER: A-378-CIP2

INFORMATION FOR SEQ ID NO: 125:

SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Simi
Matches 400;
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MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 125:
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MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                                                      61 VCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRYLEIEFCLK
                                                                                                                                                                                                                                                                                                                                                                                           61 VCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRYLEIEFCLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MNKLLCCALVFLDISIKWTTQETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MNKLLCCALVFLDISIKWTTQETFPPKYLHYDEETSHQLLCDKCPPGTYLKQHCTAKWKT
                    VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL 401
                                                                                                   SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKT
                                                                                                                                                                            KRQHSSQEQTFQLLKLWKHQNKDQDIVKKIIQDIDLCENSVQRHIGHANLTFEQLRSLME
                                                                                                                                                                                                                                                           HDNICSGNSESTQKCGIDVTLCEEAFFRFAVPTKFTPNWLSVLVDNLPGTKVNAESVERI
                                                                           SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRIKNGDQDTLKGLMHALKHSKTYHFPKT
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VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVQSVKISCL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>,</u>
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Pred. No. 3.9e-177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 401;
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    401
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